ORDER NO. TSD-7712-305

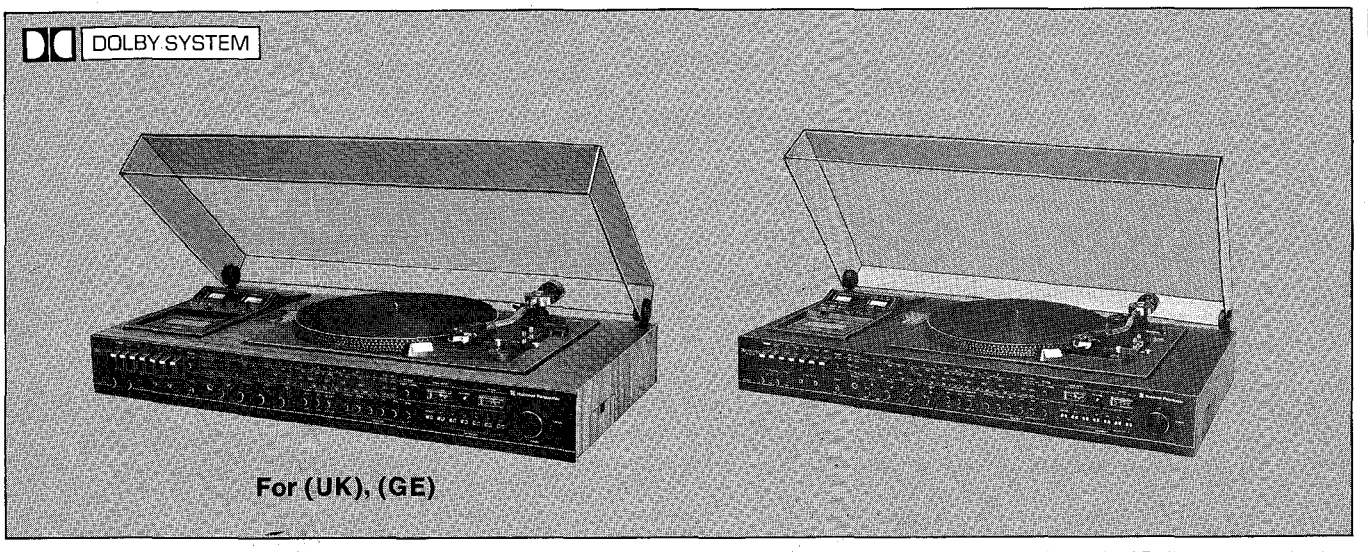
Service Manual

FM/AM/FM STEREO RADIO WITH FM "SENSOR TOUCH" PRESET TUNING SYSTEM WITH DOLBY* NOISE REDUCTION SYSTEM, CASSETTE DECK AND RECORD PLAYER

Compact Stereo

SG-3090LD (UK), (GE)

SG-3090LD (UK), (GE)



* Dolby is the trade mark of Dolby Laboratories Inc.

Specifications

AMPLIFIER SECTION

Power Output	MPO 2 × 40W (THD 1%, 4 ohms) RMS 2 × 35W (THD 1%, 4 ohms) One Channel Driven RMS 2 × 28W (THD 1%, 4 ohms) Both Channel Driven
Frequency Response	10 Hz ~ 25 kHz, ±1.5 dB (DIN)
Power Band Width	10 Hz ~ 30 kHz, −3 dB (DIN)
Input Sensitivity and Impedance:	
Phono	3 mV, 47k ohms
Mic	1 mV, 3k ohms
Tape	300 mV, 30k ohms
Rec Out and Impedance	DIN: 40 mV, 82k ohms
Tone Controls:	
Bass	±15 dB at 50 HZ
Treble	±15 dB at 10 kHz
High Filter	−6 dB/oct. from 7 kHz
Loudness Control	+10 dB at 50 Hz (Volume: at −30 dB position)

FM TUNER SECTION

Tuning System	*Varactor Diode with 6 "Sensor Touch"* Pre-selectors and Manual Tuning
Frequency Range	87.5 MHz ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	2.5 μV (IHF) 3.5 μV (S/N 26 dB, Mod. 40 kHz) (DIN)
Image Ratio	45 dB (98 MHz)
Signal to Noise Ratio	60 dB (at 1 kHz, 60 dB, 40 kHz)
Distortion	MONO: 0.4% (at 1 kHz, 60 dB, 100%) STEREO: 0.5% (at 1 kHz, 60dB, 100%)
Stereo Separation	40 dB (at 1 kHz, 60 dB, 30%) 30 dB, 250 Hz ~ 6.3 kHz (60 dB, 30%) (DIN) 18 dB, 6.3 kHz ~ 12.5 kHz (60 dB, 30%) (DIN)
Selectivity	60 dB (at 1 kHz, 60 dB, 30%)

AM TUNER SECTION

Frequency Range	MW: 525 ~ 1605 kHz (572 ~ 187 m) LW: 145 ~ 285 kHz (2070 ~ 1050 m) SW: 5.9 ~ 18 MHz (50.8 ~ 16.7 m)
Intermediate Frequency (IF)	470 kHz UK only 455 kHz Except UK
Sensitivity	MW: 100 μV/m for 50 mW (1 MHz) LW: 250 μV/m for 50 mW (220 kHz) SW: 8 μV for 50 mW (12 MHz)
Image Ratio	MW: 45 dB (1 MHz) LW: 43 dB (220 kHz) SW: 15 dB (12 MHz)

RECORD PLAYER SECTION

Player System	Belt-Drive, Automatic Return
Turntable	30 cm (12"), Aluminum Die-Cast
Turntable Speeds	33-1/3 and 45 rpm, 2-speed with Pitch Control and Stroboscope
Wow and Flutter	0.1% (WRMS) 0.15% (DIN WTD)
Deviation of Turntable Speeds	+1.5%, −1.0% (DIN)
Phonomotor	Frequency Generated Servo DC Motor
Cartridge	Moving Magnet
Stylus	Diamond
Stylus Pressure	1.5g ~ 2.0g
Frequency Response	20 Hz ~ 20 kHz (DIN)
Separation	23 dB (DIN)
Signal to Noise Ratio	60 dB (DIN)

CASSETTE PLAYER/RECORDER

Playing System	Full Automatic Shut Off and Pause Control
Track System	4-Track, 2-Channel
Recording System	AC Bias, 50 kHz with Dolby NR System
Erasing System	AC Erase, 50 kHz
Tape Speed	*4.75 cm/sec. (1-7/8 i.p.s.)*
Frequency Response	25 Hz ~ 13 kHz (NORMAL) 25 Hz ~ 16 kHz (FeCr) 20 Hz ~ 16 kHz (CrO_2)
Signal to Noise Ratio	DOLBY NR − OUT: 54 dB (DIN) DOLBY NR − IN: 60 dB (DIN)
Erase Ratio	70 dB (DIN)
Channel Separation	40 dB (DIN)
Cross Talk	60 dB (DIN)
Wow and Flutter	0.1% (WRMS) 0.2% (DIN)
POWER CONSUMPTION	200W
POWER SUPPLY	AC 110V, 120V, 220V, 240V, 50/60 Hz
DIMENSIONS (W × H × D)	
Center Unit	740 mm × 183 mm × 416 mm (29-1/16") × (7-7/32") × (16-3/8")

WEIGHT

Center Unit	17.1 kg (37 lb. 10 oz.)

● Specifications are subject to change without notice for further improvement.

National Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

DISASSEMBLY INSTRUCTIONS

■ **To Remove Record Player**

Lift record player and unplug 5P connector jack from PC board and 2 pin plugs from record player socket.

NOTE:

When removing turntable, be sure to take off the belt from the capstan as shown in Fig. 1.

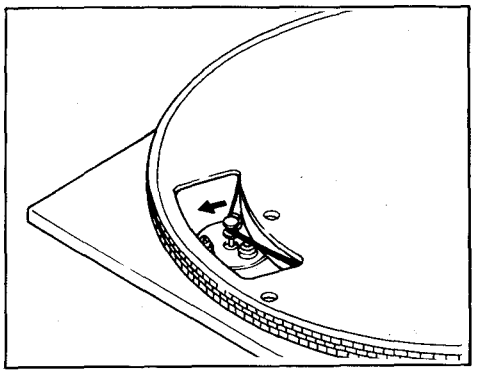


FIG. 1

■ **To Replace Components**

1. Remove record player. (Refer to above instructions.)
2. Push EJECT button to open cassette lid.
3. Carefully push stops of cassette lid located on both sides, as shown in Fig. 2. Then cassette lid can now be removed from cassette cover.
4. Remove two cassette cover mounting screw, Nos. 1 ~ 2, as shown in Fig. 7.
5. Remove seven (7) knobs from front panel.
6. Remove four (4) bottom board mounting screws, Nos. 12 ~ 15, as shown in Fig. 7.
7. Remove five (5) rear board mounting screws Nos. 7 ~ 11, and remove four (4) cabinet mounting screws, Nos. 3 ~ 6, as shown in Fig. 7.
8. Unsolder faulty components, and replace it with a new one.
9. To reassemble, reverse above procedure.

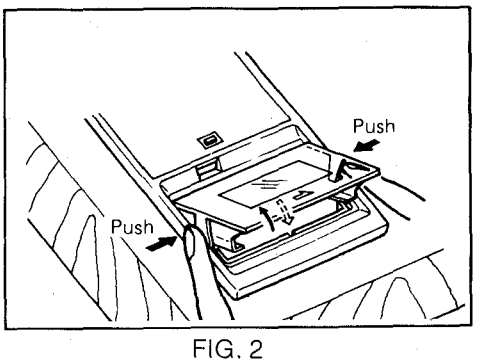


FIG. 2

■ **To Remove Escutcheon from Chassis**

1. Refer to above instructions 1 to 5.
2. Remove five (5) escutcheon mounting screws Nos. 16 ~ 20, as shown in Fig. 7.
3. To reassemble, reverse above procedure.

■ **To Remove Cassette Deck**

1. Refer to instructions to remove escutcheon from chassis above.
2. Remove seven (7) cassette deck mounting screws Nos. 21 ~ 27, as shown in Fig. 7, and remove mike jack.
3. To reassemble, reverse above procedure.

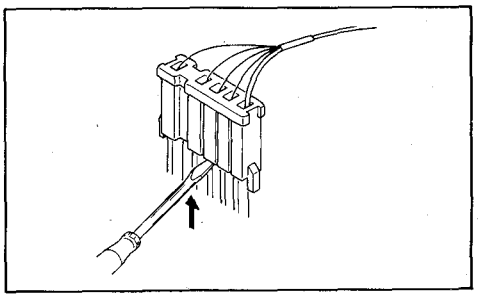


FIG. 3

■ **To Remove the Connector Assembly**

Raise the connector plug with a screwdriver, and pull it up as shown in Fig. 3.

Be careful not to damage connector lead wires.

■ **To Remove Remote Wire Assembly**

Lift remote wire assembly upward by pushing the lower portion of plastic hook with a suitable screwdriver, as shown in Fig. 4.

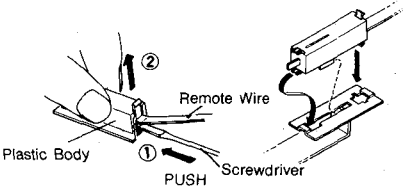


FIG. 4

■ **To Install Remote Wire Assembly**

Put the front portion of remote wire assembly into the mounting board while inclining the plastic body and push the top portion of body, as shown in Fig. 5.

FIG. 5

■ **Note for Treatment of Remote Wire Assembly**

When servicing remote wire assembly, be sure to hold gently, and do not bend a part of it tightly, as shown in Fig. 6.

Before lifting the 8-track player/recorder (or circuit board), be sure to remove remote wire assembly carefully to prevent it from being damaged.

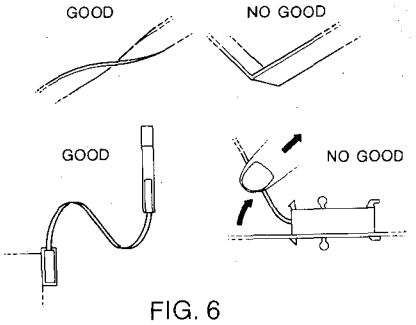


FIG. 6

PARTS LOCATION OF CABINET AND CHASSIS

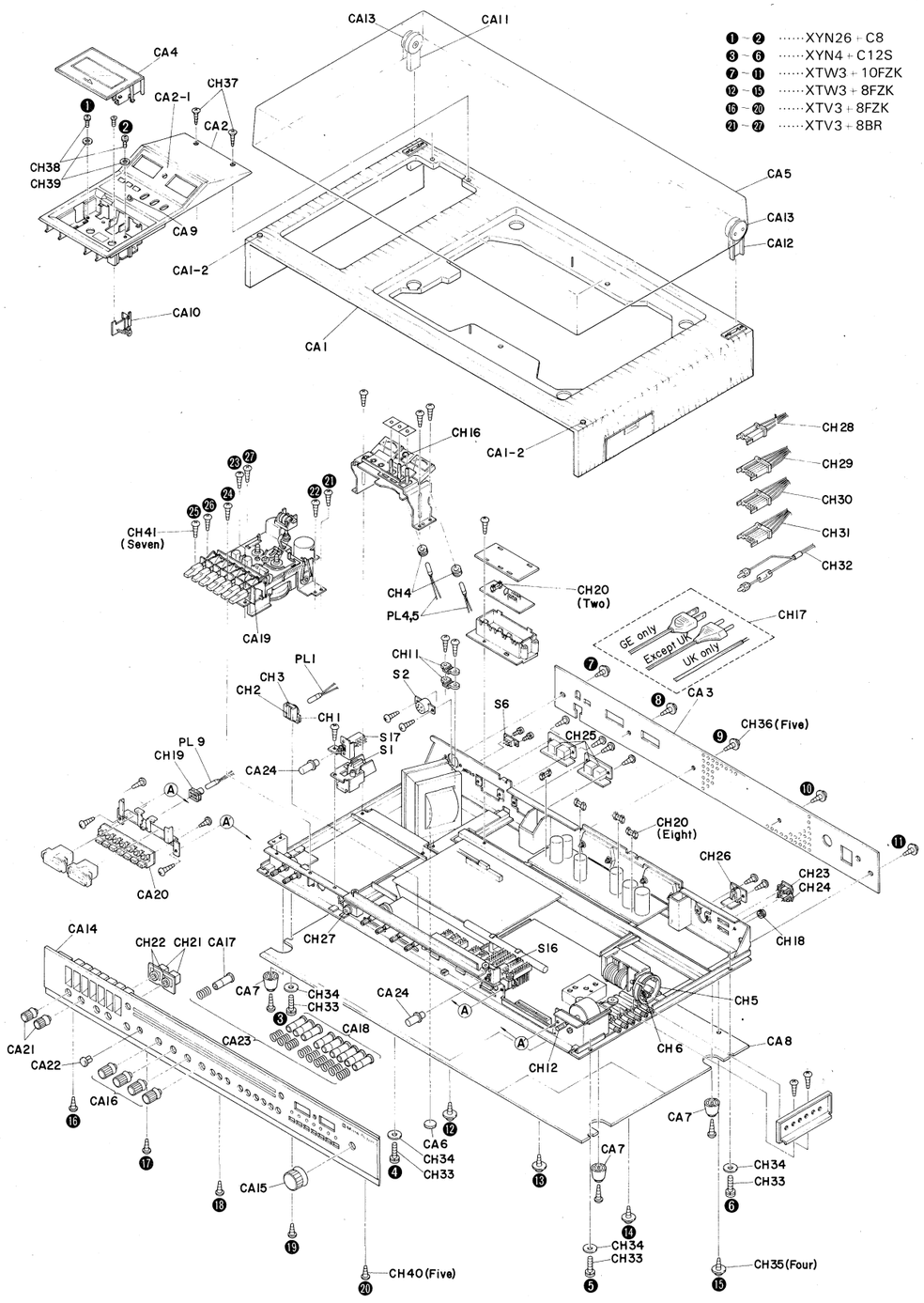


FIG. 7

EXPLODED VIEW OF CASSETTE TAPE DECK (SJD80)

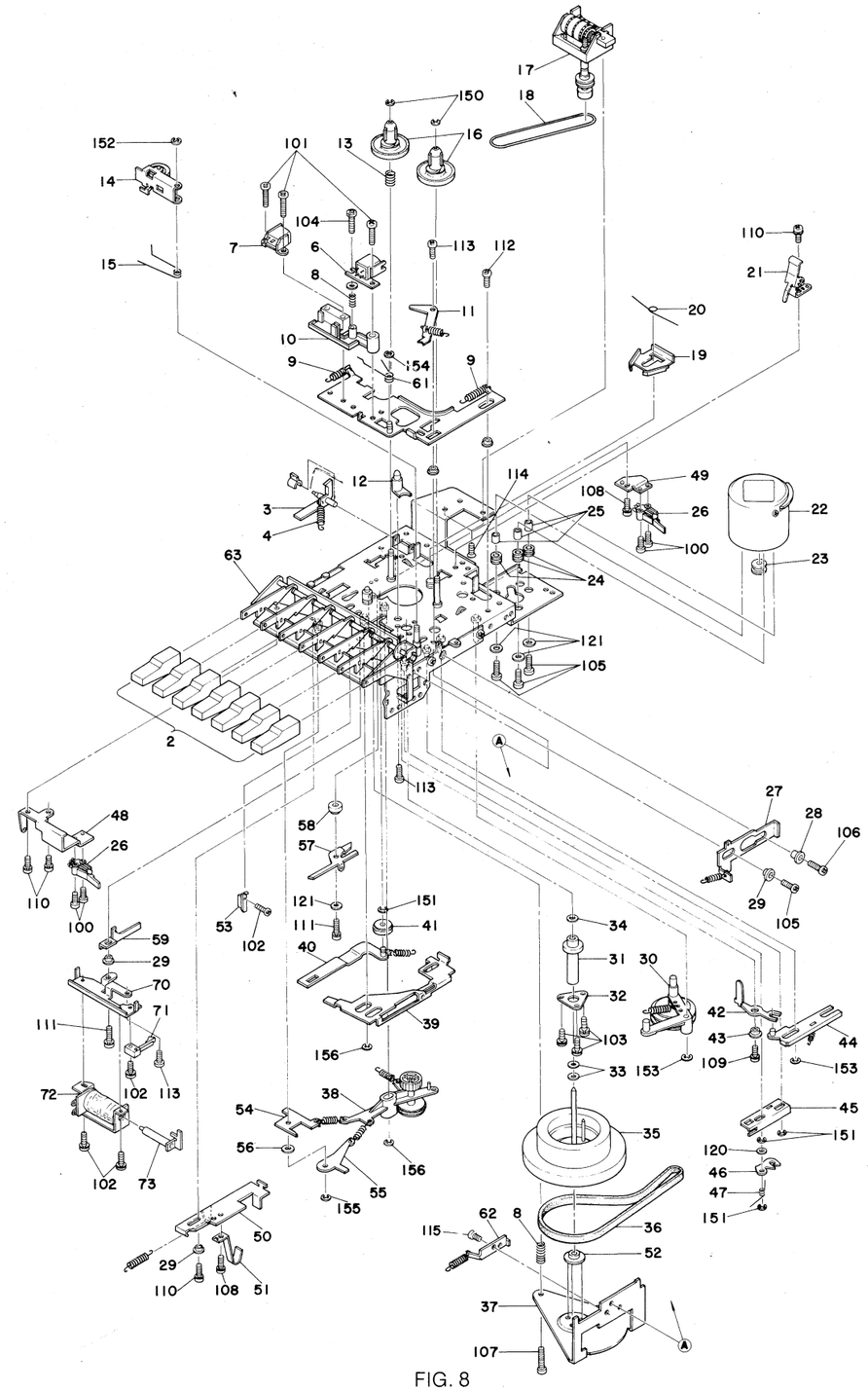
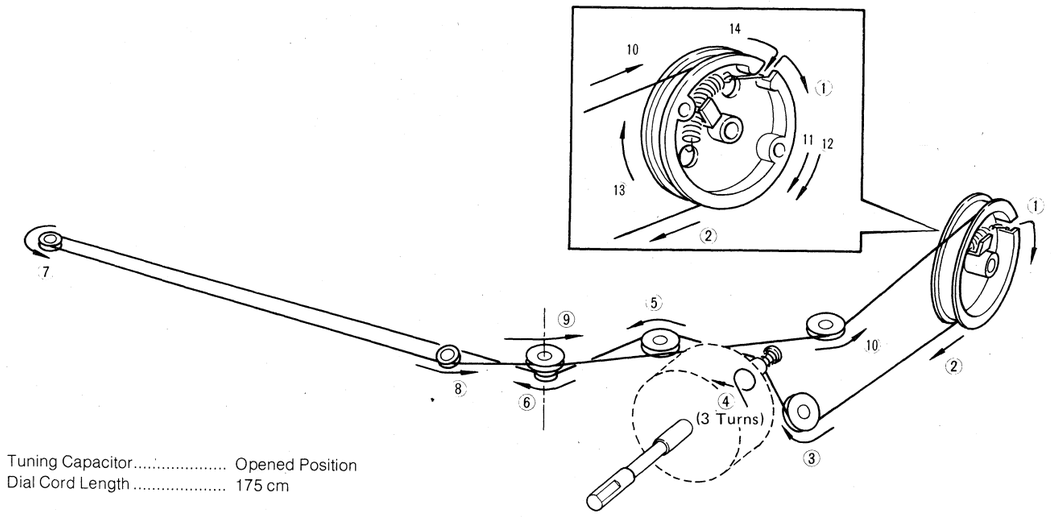


FIG. 8

DIAL CORD STRINGING GUIDE



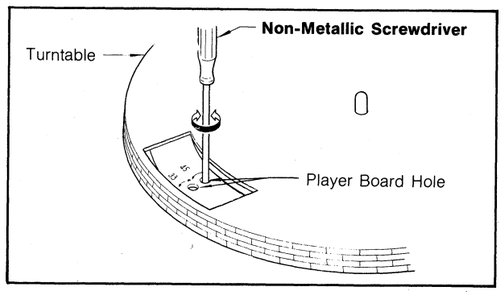
Tuning Capacitor..... Opened Position
Dial Cord Length ..... 175 cm

FIG. 9

MOTOR SPEED ADJUSTMENT

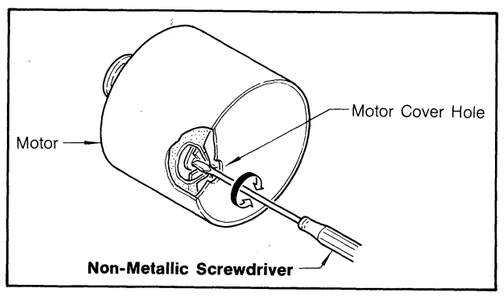
■ **Adjust Motor Speed of Record Player**

1. Remove turntable mat from turntable.
2. Insert **non-metallic screwdriver** to player board hole.
3. Fast adjust: Clockwise.
   Slow adjust: Counterclockwise.

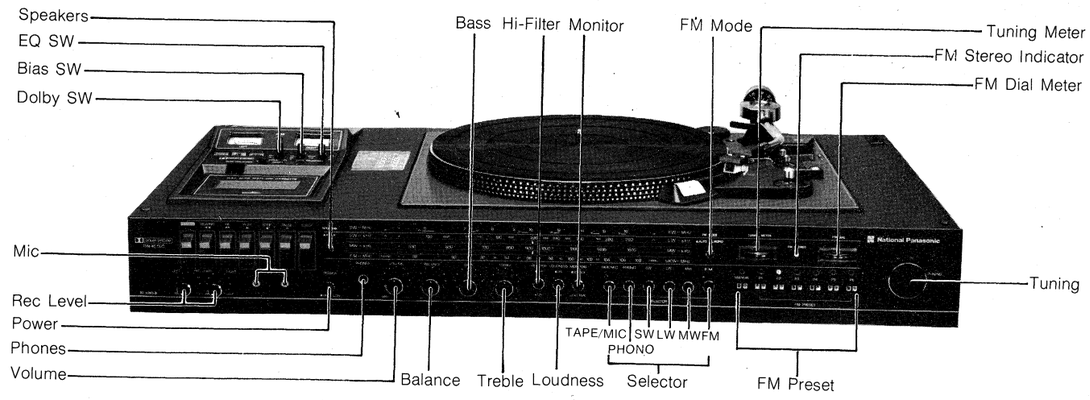


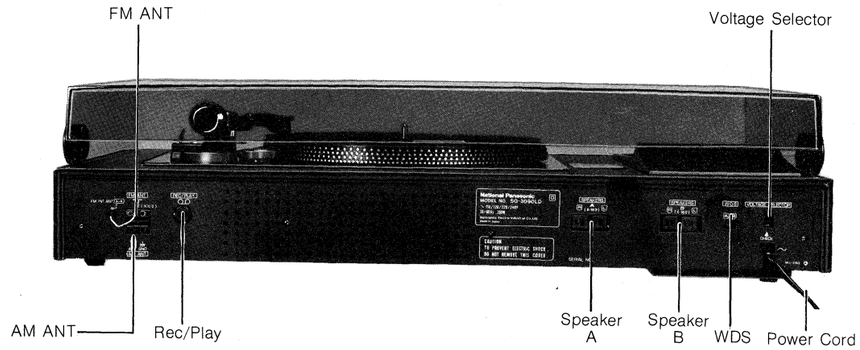
■ **Adjust Motor Speed of Cassette Tape Deck**

1. Remove cassette tape deck. (Refer to Disassembly Instruction.)
2. Insert **non-metallic screwdriver** to motor cover hole.
3. Fast adjust: clockwise.
   Slow adjust: counterclockwise.



LOCATION OF CONTROLS





ALIGNMENT POINTS

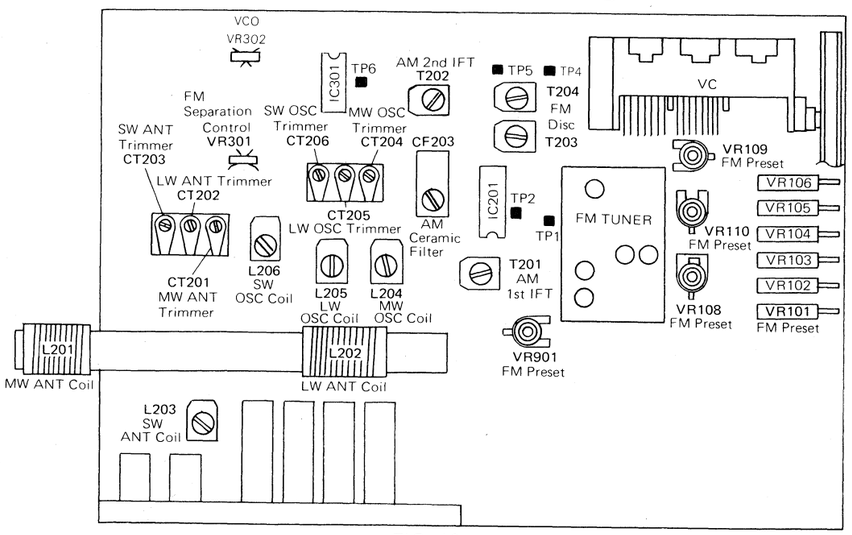


FIG. 10

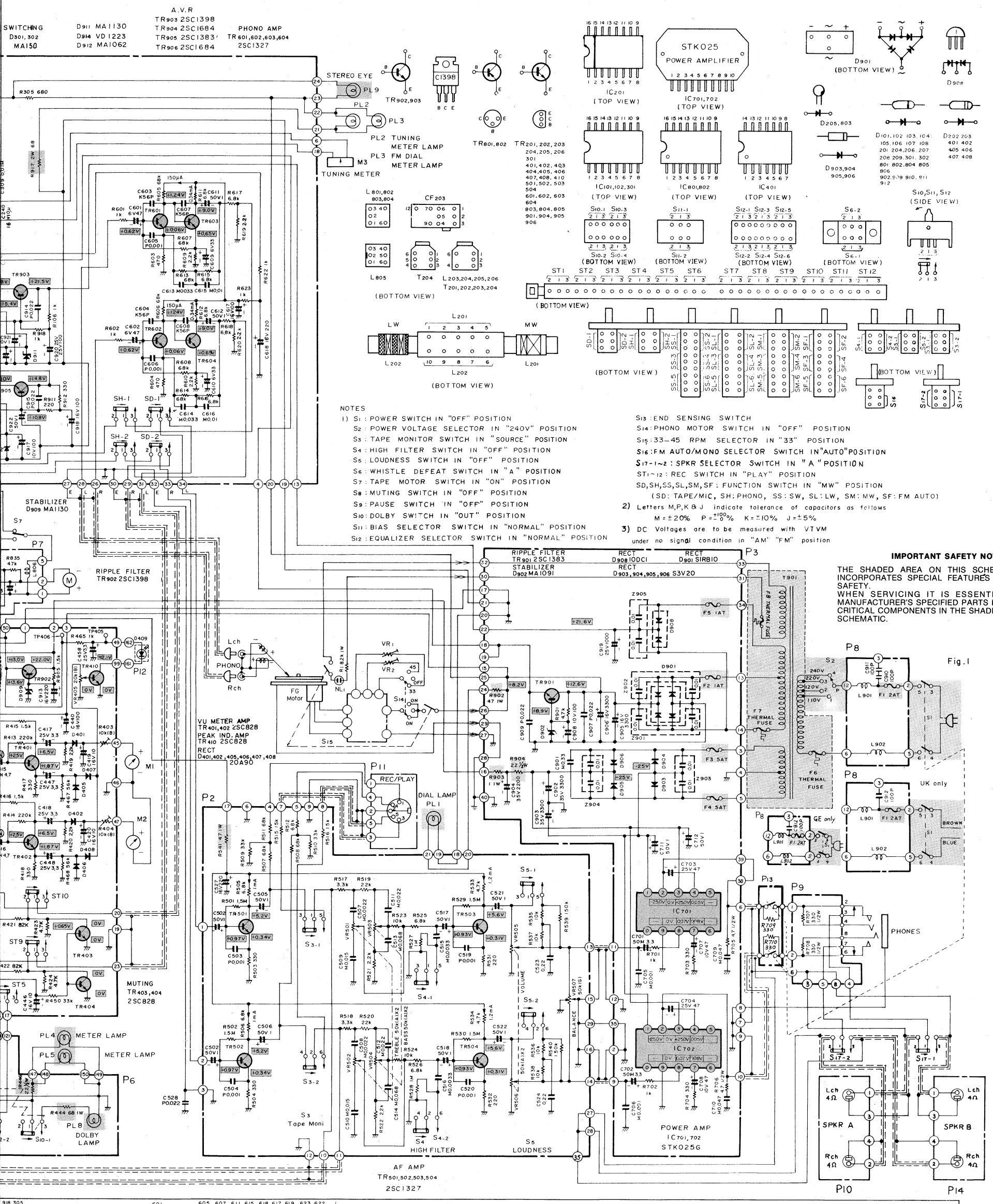
SCHEMATIC DIAG

FM RF TUNER SSD5002
FM TUNING TR101~107 2SC1684 D101~108 MA150
FM AGC D207,208 0A90
AM AGC D201 20A90
FM AM IF IC201 AN217
AM CONV TR201 2SC1359
FM DET D202, 203 20A90
TUNING METER TR202 2SC828 D204 20A90 D205 VD1123
AM DET D206 0A90
FM AF AMP TR301 2SC1327
FM MPX IC301 LA3350A
MUTING TR203,204,205,206 2SC1684
SWITCHING D301, 302 MA150
D911 MA1130
D914 VD1223
D912 MA1062

MANUAL/PRESET TOUCH BUTTON
MANUAL/PRESET INDICATOR
FM MANUAL/ PRESET INDICATOR LAMP D109~115 SR103D
PLAY/REC HEAD Lch
PLAY/REC HEAD Rch
TAPE EQ AMP TR411,412,413,414 2SC1327
MIC Lch
MIC Rch
MIC AMP TR407,408 2SC1327
BIAS OSC TR801 2SB175B
BIAS AMP TR802 2SB324
REC AMP TR405,406 2SC828
ERASE HEAD
(—V) is shown the voltage of CHANNEL ON.
FM DIAL METER
STABILIZER D806 MA1075
DAMPER D807 1001
STABILIZER D909 MA1130
PULSE AMP TR803 2SC828
RECT D804,805 20A90
END SENSOR TR804 2SC828
TR805 2SC1568
DOLBY IC801,802 NE545B
AOC D803 VD1121
REC LAMP BIAS SW PL6
DOLBY SW
CrO2 LAMP EQ SW PL7
DOLBY LAMP PL8
METER LAMP PL4 PL5
RIPPLE F TR902 2S
When adjusting FM band coverage, minimum frequency must not be adjusted under 87.5 MHZ

R	101 102 103 104 105 106 107 108 VR110 121 122 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440

MATIC DIAGRAM



NOTES

1) S1 : POWER SWITCH IN "OFF" POSITION
   S2 : POWER VOLTAGE SELECTOR IN "240V" POSITION
   S3 : TAPE MONITOR SWITCH IN "SOURCE" POSITION
   S4 : HIGH FILTER SWITCH IN "OFF" POSITION
   S5 : LOUDNESS SWITCH IN "OFF" POSITION
   S6 : WHISTLE DEFEAT SWITCH IN "A" POSITION
   S7 : TAPE MOTOR SWITCH IN "ON" POSITION
   S8 : MUTING SWITCH IN "OFF" POSITION
   S9 : PAUSE SWITCH IN "OFF" POSITION
   S10 : DOLBY SWITCH IN "OUT" POSITION
   S11 : BIAS SELECTOR SWITCH IN "NORMAL" POSITION
   S12 : EQUALIZER SELECTOR SWITCH IN "NORMAL" POSITION
   S13 : END SENSING SWITCH
   S14 : PHONO MOTOR SWITCH IN "OFF" POSITION
   S15 : 33-45 RPM SELECTOR IN "33" POSITION
   S16 : FM AUTO/MONO SELECTOR SWITCH IN "AUTO" POSITION
   S17-1~2 : SPKR SELECTOR SWITCH IN "A" POSITION
   ST1~12 : REC SWITCH IN "PLAY" POSITION
   SD, SH, SS, SL, SM, SF : FUNCTION SWITCH IN "MW" POSITION
   (SD: TAPE/MIC, SH: PHONO, SS: SW, SL: LW, SM: MW, SF: FM AUTO)
2) Letters M, P, K & J indicate tolerance of capacitors as follows
   M = ±20% P = +100 −0% K = ±10% J = ±5%
3) DC Voltages are to be measured with VTVM under no signal condition in "AM" "FM" position

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY.
WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

Fig. I

| | | |

WIRING DIAGRA

FM EXT ANT

FM ANT

WHITE → To P1- (2)

ORANGE → To P1- (1)

AM ANT

BLACK → To P1- (5)

VIOLET → To P1- (35)

ORANGE → To P8- [3]

REC/PLAY

YELLOW → To P2- (4)

SKY-BLUE → To P2- (5)

To P2- (8)

To P2- (7)

To P2- (9)

P11

IC701, IC702

1	-25.0V
2	0 V
3	25.0 V
4	0.05 V
5	—
6	—
7	0.08 V
8	0.07 V
9	0 V
10	—

IC301

	EYE OFF	EYE ON
1	12.8V	12.8V
2	2.68V	2.66V
3	4.59V	4.59V
4	4.47V	11.2V
5	11.1V	11.2V
6	1.02V	1.04V
7	0 V	0 V
8	0.32V	0.32V
9	6.2V	6.2V
10	2.03V	2.05V
11	2.05V	2.07V
12	2.27V	0.97V
13	2.30V	2.04V
14	2.29V	2.04V
15	2.05V	2.04V
16	2.67V	2.67V

IC801, 802

1	6.26V
2	6.25V
3	6.3V
4	6.25V
5	6.2V
6	6.25V
7	5.8V
8	6.96V
9	0 V
10	6.96V
11	7.61V
12	0.66V
13	0.67V
14	0.55V
15	0.55V
16	12.23V

TR902

C	22.0V
B	13.6V
E	13.0V
Ic	—

TR901

C	12.6V
B	8.9V
E	8.2V
Ic	—

To P2- (20) (18) (4) (14) (13)

RED, BLACK, ORANGE

To P2- (13)

To P2- (15)

To S2-P

To P6- (25) (21) (24) (20) (23)

ST1~ST11 REC SWITCH

P3

IC702, IC701

To P3- (15) RED

To P3- (16) PINK

To P3- (17) BLACK

To POWER TRANSFORMER (2nd)

BROWN → To POWER TRANSFORMER (2nd)

BROWN → To POWER TRANSFORMER (2nd)

GREEN → LUG-A (GND)

To P6- (29)

To P6- (30)

To P2- (14) (16) (12) LUG-B (GND)

BLACK

BLUE → To POWER TRANSFORMER(2nd)

BLACK → To POWER TRANSFORMER(2nd)

BLUE → To POWER TRANSFORMER(2nd)

BLACK → To P9- (7)

To P14- (1)

To P9- (6)

To P14- (2)

To P2- (28)

WHITE, YELLOW

To POWER TRANSFORMER (2nd)

To POWER TRANSFORMER (2nd)

BLACK → To P4- (1)

PINK → To P4- (2)

RED → To P4- (3)

To P4- (23)

To P4- (20)

To P4- (19)

To P2- (33)

TR202

C	8.28V
B	0.45V
E	0V

TR301

C	3.16V
B	2.3V
E	2.0V

FM DIAL METER

FM TUNING METER

PL9 STEREO EYE

To PH

TR601, TR602

C	1.24V
B	0.62V
E	0.06V
Ic	85μA

To P1- (37) ORANGE

SKY-BLUE → To P1- (12)

BLACK → To P1- (11)

To P1- (41)

To P1- (44)

To FM ANT TERMINAL-1 WHITE

To FM ANT TERMINAL-2 ORANGE

To P1- (36) SKY-BLUE

ORANGE → To P3- (18)

BLACK → To AM ANT TERMINAL-1

To P1- (41)

To P1- (44)

To SI6-3

GRAY, BROWN

FM TUNER

To FM DIAL METER ⊕

To FM DIAL METER ⊖

BLACK, SKY-BLUE

To P3- (21)

To P3- (22)

To P1- (9)

BLACK

BLUE

TR603, TR604

C	9.0V
B	1.24V
E	0.65V
Ic	0.25mA

To P11- (5) (3) (2) (4) (1)

SKY-BLUE, YELLOW

RED, WHITE

ORANGE → To P5- (6)

To P5- (8) (9) (7) (5) (4)

IC201

	FM	AM
1	0.8V	0.8V
2	0 V	0 V
3	2.7V	2.8V
4	6.3V	6.5V
5	1.07V	0.83V
6	0 V	0 V
7	1.08V	0.9V
8	7.5V	7.8V
9	0.8V	7.3V
10	0.8V	1.46V
11	0.78V	0.79V
12	0.87V	7.3V
13	0.55V	0.73V
14	0.86V	1.48V
15	0.87V	7.3V
16	0.55V	0.73V

IC101

1	13.9V
2	13.9V
3	13.9V
4	13.9V
5	0V
6	0.67V
7	1.07V
8	1.07V
9	1.07V
10	14.0V
11	(14.0V)
12	(14.0V)
13	(14.0V)
14	(14.0V)
15	14.9V
16	3.6V

IC102

1	13.9V
2	13.9V
3	13.9V
4	13.9V
5	0V
6	—
7	1.07V
8	1.07V
9	1.07V
10	1.07V
11	(14.0V)
12	(14.0V)
13	(14.0V)
14	(14.0V)
15	14.9V
16	3.6V

To METER LAMP

To SI6-1

To CV202

VIOLET → To AM ANT TERMINAL-2

To PI- (49)

To PI- (50)

SI6 FM MONO AUTO SELECTOR SWITCH

To P5- (12)

To P5- (11)

To P5- (10)

P6 P5 P4 P3 P2 P1 MANUAL

FM PRESET

SF1~6 FM AUTO SWITCH

SM1~6 MW SWITCH

SL1~6 LW SWITCH

SS1~6 SW SWITCH

SH1,2 PHONO SWITCH

ST1,2 TAPE/MIC SWITCH

S3 TAPE MONITOR SWITCH

S5 LOUDNESS SWITCH

TR903

C	21.5V
B	15.4V
E	14.8V

TR904

C	15.4V
B	14.2V
E	13.6V

TR905

C	14.8V
B	10.8V
E	10.2V

TR906

C	10.8V
B	8.1V
E	7.5V

TR101~107

C	10.2V
B	0.9V
E	0V

TR201

C	7.3V
B	2.19V
E	1.55V
Ic	—

TR205

C	0V
B	0.67V
E	0V
Ic	—

TR206

C	0V
B	0.79V
E	0V
Ic	—

TR203

C	0V
B	0V
E	0V
Ic	—

TR204

C	0V
B	0V
E	0V
Ic	—

* This diagram might be modified without notice for further development of technology.

RING DIAGRAM

TR902	
C	22.0V
B	13.6V
E	13.0V
Ic	—

TR403,TR404	
C	0V
B	0.65V
E	0V
Ic	—

TR411,TR412	
C	1.05V
B	0.55V
E	0V
Ic	—

TR413,TR414	
C	6.84V
B	1.15V
E	0.56V
Ic	—

TR802	
C	0.27V
B	13.2V
E	13.5V
Ic	—

TR801	
C	0V
B	13.3V
E	13.1V
Ic	—

TR410	
C	12.1V
B	0V
E	0V
Ic	—

TR405,TR406	
C	9.7V
B	3.2V
E	2.5V
Ic	—

TR401,TR402	
C	6.5V
B	2.5V
E	1.87V
Ic	—

TR501,TR502	
C	5.2V
B	0.97V
E	0.34V
Ic	1mA

TR503,TR504	
C	5.6V
B	0.93V
E	0.31V
Ic	1.2mA

TR407,TR408	
C	3.29V
B	0.96V
E	0.35V
Ic	—

To SI-3,4 (Except UK)

AC CORD: BLUE To SI-4, BROWN To SI-3 (UK Only)

SPEAKERS R A L — P10 — To SI7-2-2, To P9-3, To SI7-1-2, To P2-27

S6 WHISTLE DEFEAT SWITCH — S6-2, S6-1

S2 POWER VOLTAGE SELECTOR SWITCH — BROWN, RED, YELLOW, WHITE, ORANGE — To P8-12

SPEAKERS R B L — P13 — To SI7-1-3, To P2-27, To SI7-2-3, To P9-3

P8 — L901, L902, C910 100P (Except UK), C911 100P (Except UK), C912 100P (UK only), F1

To S2-P YELLOW; To FM EXT ANT ORANGE; BROWN To SI-2; BLUE To SI-1

S17 SPEAKER SELECTOR SWITCH — To P13-1, To P9-4, To P13-2, To P9-5

T901 POWER TRANSFORMER — PRIMARY, SECONDARY

To P6-125 BLACK; To P6-121 BLUE; To P6-124 BROWN; To P6-120 PINK; To P6-123 RED

To P5-103; To P5-104; To P5-102

To P1-51; To P1-29; To P1-30

To P6-132; To P6-133; To P6-131; To P6-128

SECONDARY: BLUE To P3-3; BLUE To P3-5; BLACK To P3-4; YELLOW To P3-14; RED To P3-34; BROWN To P3-33; BROWN To P3-31; WHITE To P3-13

P4 — MC-9, MC-8, MC-7, MC-6

To P4-47; To P4-46; To P4-45

M2 VU METER RIGHT; M1 VU METER LEFT — SKY-BLUE, BLACK, YELLOW, VIOLET — P12, D409

To P4-75 WHITE; To P4-77; To P4-76

S12 EQUALIZER SELECTOR SWITCH

To P4-28; To P4-27; To P4-67; To P4-70; To P4-68

To P4-85; To P4-87; To P4-86 PL6 REC LAMP; To P4-18 BLACK; To P4-17 BLUE PL8 DOLBY LAMP; To P4-16 BROWN PL7 Cr O2 LAMP; To P4-15 PINK PL4,5 METER LAMP

P6 — S10, S11, S12, J55, J56, J57, J58

R827 150(1W); R445 47(1W); R446 22(1W); R444 68(1W); PL8, PL6, PL5, PL4, PL7

To P4-14 RED; To P4-64; To P4-60; To P4-57 PINK

S11 BIAS SELECTOR SWITCH; S10 DOLBY SWITCH

To P4-74; To P4-73; To P4-72

To MC-6 GRAY; To MC-9; To MC-7 BROWN

PLUNGER-A; ERASE HEAD; R/P HEAD

BLUE, RED, PINK, SKY-BLUE

To P4-47; To P4-46; To P4-45

P7 — S7 TAPE MOTOR SWITCH — VIOLET

To P4-23; To P4-20; To P4-19

To P2-33

To PII-5; To PII-3; To PII-2; To PII-4; To PII-1

PL1 DIAL POINTER

To P3-20 BLACK; To P3-24 RED

SKY-BLUE, YELLOW, WHITE, RED

CASSETTE MOTOR — BLUE To P6-5; To P8-2 BROWN; To P9-1

TO AC CORD — BLUE, BLACK

ORANGE

S16-2, S16-1 — R709 330 1/2W, R710 330 1/2W — P14

To P9-2; To P3-10; To P3-6

S1 POWER SWITCH

P2 — To PI-30

S9 PAUSE SWITCH — PINK

ORANGE To P4-82

To P3-8 BLACK; To P10-1; To P10-3; To S17-2-1

S8 MUTING SWITCH — WHITE

To P4-22; To P4-21

To P3-42; To P13-4

P9 — R707 330 1/2W, R708 330Ω 1/2W

To P4-59; To P4-58; To P4-56

To P13-3

To P2-10; To P2-11; To P2-12

P5 — R457 10k, R452 20kΩ, R451 20k(A), R455 330, R447 3.3k, C451 50V4.7, C452 50V4.7, R448 3.3k, C454 P0.001, TR407, TR408, C456 16V0.22, C455 16V0.22, R454 6.8k, R453 6.8k, C441 0V 220

To P3-37; To P14-2; To P14-4; To P14-3; To P14-1

To P5-112; To P5-113; To P5-110

To P3-1; To P3-2; To P3-11; To P3-12

To P3 10; To P3-7; To P10-2; To P10-4; To P3-6; To P3-37

HEADPHONES

MIC JACK — RED, WHITE

To P4-22; To P4-21

To MC-8

To P6-145; To P6-146; To P6-142; To P6-141

To P5-100 ORANGE

FM MONO AUTO SELECTOR SWITCH

S3 E MONITOR SWITCH; S5 LOUDNESS SWITCH; S4 HIGH FILTER SWITCH; VR501,502 TREBLE CONTROL; VR503,504 BASS CONTROL; VR507 BALANCE CONTROL; VR505,506 VOLUME CONTROL

VR452 REC LEVEL CONTROL (RIGHT); VR451 REC LEVEL CONTROL (RIGHT)

ALIGNMENT INSTRUCTIONS (RADIO)–1

Notes:
1. Volume Control ..... Maximum (AM-IF and RF, FM-RF)
   Minimum (FM-IF)
2. Bass and Treble Control ..... Center
3. Balance Control..... Center
4. Band Selector ..... LW, MW, SW, FM AUTO
5. Power Switch ..... ON
6. Tape Monitor..... SOURCE
7. Output to signal generator should be no higher than necessary to obtain output reading.
8. Make certain that speaker system is connected to the tuner when aligning.

STEP	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
AM-IF and RF ALIGNMENT						
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	470 kHz (UK only) 455 kHz (Except UK) 30% Mod. with 400 Hz	Point of non-intereference (on/about 600 kHz)	Output meter across speaker jack (L). (Imp. 4Ω)	T201 (AM 1st IFT) T202 (AM 2nd IFT)	Adjust for maximum output.
2 (LW)	Fashion loop of several turns of wire and radiate signal into loop of receiver.	145 kHz 30% Mod. with 400 Hz	145 kHz (15.7 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	L205 (LW OSC Coil) L202 (LW ANT Coil)	Adjust for maximum output by sliding coil L202 along ferrite core.
3 (LW)	Fashion loop of several turns of wire and radiate signal into loop of receiver	285 kHz 30% Mod. with 400 Hz	285 kHz (194.7 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	CT205 (LW OSC Trimmer) CT202 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
4 (MW)	Fashion loop of several turns of wire and radiate signal into loop of receiver.	550 kHz 30% Mod. with 400 Hz	550 kHz (22.7 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	L204 (MW OSC Coil) L201 (MW ANT Coil)	Adjust for maximum output by sliding coil L201 along ferrite core.
5 (MW)	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1500 kHz 30% Mod. with 400 Hz	1500 kHz (192.1 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	CT204 (MW OSC Trimmer) CT201 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (4) and (5).
6 (SW)	Connect to EXT antenna and ground through SW Dummy antenna. (Refer to Fig. 13)	5.9 MHz 30% Mod. with 400 Hz	5.9 MHz (18.5 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	L206 (SW OSC Coil) L203 (SW ANT Coil)	Adjust for maximum output.
7 (SW)	Connect to EXT antenna and ground through SW Dummy antenna. (Refer to Fig. 13)	18 MHz 30% Mod. with 400 Hz	18 MHz (201.1 mm)	Output meter across speaker jack (L). (Imp. 4Ω)	CT206 (SW OSC Trimmer) CT203 (SW ANT Trimmer)	Adjust for maximum output. Repeat steps (6) and (7).
Note: CF203 is pre-aligned. Do not touch it.						
FM-IF and DETECTOR ALIGNMENT						
1 (FM)	High side through 0.001mfd to point TP1. Common to chassis (TP2).	10.7 MHz (400 kHz SWP.)	Point of non-interference (on/about 98 MHz)	Connect vert amp. of scope to point TP4. Common to chassis (TP5).	T203 (FM 1st IFT)	Adjust for maximum amplitude and symmetrical curve (Refer to Fig. 11)
2 (FM)	High side through 0.001mfd to point TP1. Common to chassis (TP2).	10.7 MHz (400 kHz SWP).	Point of non-interference (on/about 98 MHz)	Connect vert amp. of scope to point TP4. Common to chassis (TP5).	T204 (FM Disc. IFT)	Adjust for maximum amplitude and proper linearity between ±100 kHz markers. (Refer to Fig. 12)
Note: Before aligning step 1, turn the core of T204 fully counterclockwise.						

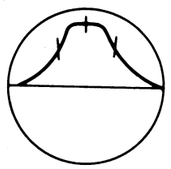


FIG. 11

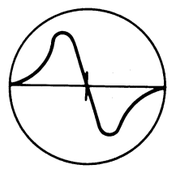


FIG. 12

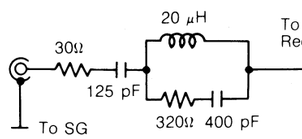


FIG. 13

FIG. 14 DUMMY ANTENNA

ALIGNMENT INSTRUCTIONS (RADIO)–2

■ FM RF ALIGNMENT

Notes:
1. Volume Control ..... Center
2. Bass and Treble Control ..... Center
3. Balance Control..... Center
4. Band Selector ..... FM AUTO
5. FM Sensor Touch Button..... MANUAL, P1, P2, P3, P4, P5, P6
6. FM Preset VR (VR101～106)..... Turn them fully counterclockwise.

STEP	SIGNAL GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	FM SENSOR TOUCH BUTTON	ADJUST	REMARKS
	CONNECTION	FREQUENCY					
1	Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	102 MHz 30% Mod. with 400 Hz	102 MHz	Output meter across speaker jack (L) (Imp. 4Ω)	MANUAL	VR901	Adjust for maximum output.
2	Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	87.4 MHz 30% Mod. with 400 Hz	Turn them fully counterclockwise.	Output meter across speaker jack (L) (Imp. 4Ω)	MANUAL	VR109	Adjust for maximum output.
3	Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	87.4 MHz 30% Mod. with 400 Hz	Turn them fully counterclockwise.	Output meter across speaker jack (L) (Imp. 4Ω)	P1	VR110	Adjust for maximum output. Repeat step (2).
4	Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	106 MHz 30% Mod. with 400 Hz	106 MHz	Output meter across speaker jack (L) (Imp. 4Ω)	P1	VR101	Adjust for maximum output.
5	Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	106 MHz 30% Mod. with 400 Hz	106 MHz	FM Dial Meter	P1	VR108	Adjust for 106 MHz indication reading on meter. Repeat steps (1)～(4).

Notes: **1. Before aligning step 1, turn the cores of VR108, VR109, VR110, and VR901 fully counterclockwise.**
2. FM Tuner is pre-aligned. Do not touch it.

Caution: To correct the drift of FM band coverage (87.5 ～ 108 MHz), adjust VR108, VR109, VR110 and VR901.

■ FM STEREO ALIGNMENT

Notes: Tuner:
- Volume Control ..... Audible level of speaker sound
- Treble Control ..... MIN
- Bass Control..... Center
- Band Selector ..... FM AUTO
- Balance Control..... Center
- FM Sensor Touch Button..... MANUAL

EQUIPMENT CONNECTION	ADJUST	REMARKS
Connect frequency counter to TP6 and ground at no signal condition.	VR302 (VCO)	Adjust VR302 for 19 kHz ±100 Hz on frequency counter reading.

SEPARATION ALIGNMENT

Notes:
1. Stereo Modulator: Connect Stereo Modulator to EXT. Mod. terminal of signal generator.
2. Signal Generator:
   - Modulation Rate of 19 kHz Pilot Signal 10%
   - Modulation Rate of Right and Left Signal 27%
   - Output Level..... 60 dB
3. Tuner (Balance Control): Adjust balance control so that output level from both channels becomes equal.

EQUIPMENT CONNECTION			ADJUST	REMARKS
SIGNAL GENERATOR	VTVM	OSCILLOSCOPE		
Connect to EXT. FM antenna terminal through dummy antenna. (Refer to Fig. 14)	Connect across speaker jack. (Imp. 4Ω)	Connect vertical amp. input of scope to terminals of VTVM.	VR301 (Separation Control)	Adjust VR301 for minimum indication of VTVM from the left side output when the right side of stereo modulator is modulated. Adjust VR301 in the same way for the right side. Adjust for best balance between "L to R" and "R to L" separation.

Note: When aligning separation, disconnect frequency counter.

ALIGNMENT INSTRUCTIONS (CASSETTE DECK)

Notes:
1. Function Selector ..... TAPE
2. Balance Control..... Center
3. Depress push buttons PLAY and REC at the same time. (Be sure to release the record safety lever manually.)
4. Dolby Switch ..... OUT

STEP	CIRCUITS	VTVM CONNECTION	TAPE SELECTOR	ADJUSTMENT	REMARKS
1	AC BIAS CIRCUIT	Connect positive side to TP804 (+) and negative side to TP805 (−). (Refer to Fig. 15)	Bias SW: Normal	L805	Adjust L805 for maximum indication on VTVM. WDS "B" side
2	AC BIAS CIRCUIT	Connect positive side to TP804 and negative side to TP805. (Refer to Fig. 15)	Bias SW: CrO_2	VR801	Adjust VR801 for 12V reading on VTVM. WDS "A" side.
3	AC BIAS CIRCUIT	Connect positive side to TP401 and negative side to TP403. (Refer to Fig. 15)	Bias SW: Normal	VR803	Adjust VR803 and VR802 for 3.3mV reading on VTVM. WDS "B" side.
		Connect positive side to TP402 and negative side to TP404. (Refer to Fig. 15)		VR802	
4	19 kHz TRAP CIRCUIT	Connect positive side to TP801 and negative side to TP803(E). (Refer to Fig. 15)	EQ SW: Normal	L803	Turn Function Selector to AUX and Dolby SW to IN. Apply audio signal (300 mV, 19 kHz) to both L-ch and R-ch AUX terminals. Adjust L803 and L804 for minimum indication on VTVM.
		Connect positive side to TP802 and negative side to TP803(E). (Refer to Fig. 15)		L804	
5	DOLBY CIRCUIT	Connect positive side to TP801 and negative side to TP803. (Refer to Fig. 15)	EQ SW: Normal	VR401	Turn Dolby SW to IN and playback a test tape (MTT-150). Adjust VR401 and VR402 for 580 mV reading on VTVM.
		Connect positive side to TP802 and negative side to TP803. (Refer to Fig. 15)		VR402	
6	VU METER CIRCUIT	.....	EQ SW: Normal	VR403, VR404	Turn Dolby SW to IN and playback a test tape (MTT-150). Adjust VR403 and VR404 so that needle rests at +3 dB (◻◻ mark) as shown in Fig. 16.
7	REC CURRENT CIRCUIT	Connect positive side to TP401 and negative side to TP403. (Refer to Fig. 15)	EQ SW: Normal	VR461	Connect TP804 to TP805. Turn Function Selector to AUX and Dolby SW to IN. Apply 1 kHz audio signal to both AUX terminals and set body REC VR's at **+3 dB** (◻◻ mark) on VU meter. Adjust VR461 and VR462 for 0.67 mV reading on VTVM.
		Connect positive side to TP402 and negative side to TP404. (Refer to Fig. 15)		VR462	
8	PEAK INDICATOR	Connect positive side to TP806 negative side to TP807. (Refer to Fig. 15) Use for DC VTVM.	EQ SW: Normal	VR405	Turn Dolby SW to IN and playback a test tape (MTT-150). Adjust VR405 for DC 1V reading on VTVM.

Notes:
1. **Do not touch R/P Head and Erase Head when aligning.**
2. **L801 and L802 are pre-aligned. Do not touch them.**
3. **MTT-150 is DOLBY LEVEL calibration tape.**

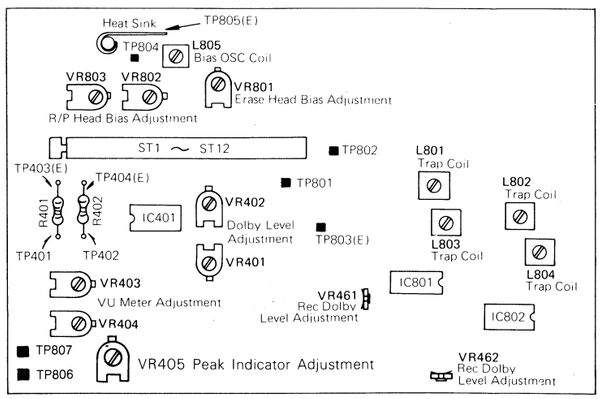


FIG. 15

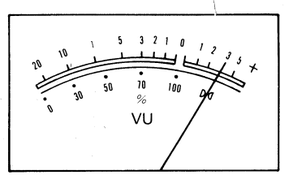


FIG. 16

*** Test Tape (6.3 kHz)**
VTT-652 or Equivalent

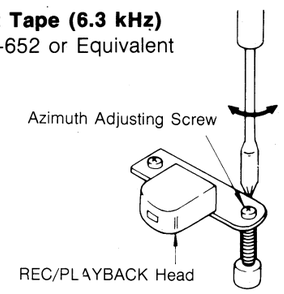


FIG. 17

RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

Playback a Standard Alignment Tape and turn Azimuth Adjusting Screw for maximum loudness.

MECHANICAL ADJUSTMENT OF CASSETTE DECK

PRESSURE ROLLER ADJUSTMENT

1. Switch set to PLAY. (Do not insert cassette.)
2. Hook Spring gauge to arm of pressure roller, as shown in Fig. 18.
3. Pull pressure roller away from the capstan in the direction of arrow 1 with spring gauge and slowly permit the pressure roller to return forward capstan in the direction of arrow 2.
4. Measure tension at time when pressure roller makes contact with capstan (or when pressure roller starts rotating.)
5. The standard tension of pressure roller should be 250 ~ 380 g.
6. If pressure is not within these limits;
   Clean the rubber roller and capstan with a soft cloth moistened with alcohol or replace pressure spring.

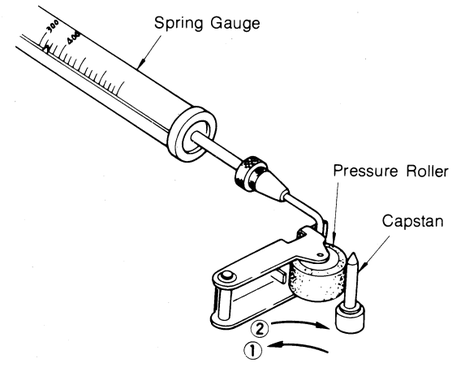


FIG. 18

TAKE-UP TORQUE ADJUSTMENT

* Test Tape: SRK-CT (Take-up Torque Meter)

1. Insert test tape.
2. Rewind the tape to its starting point.
3. Switch set to PLAY.
4. Read "▸" mark of indicator on take-up side, as shown in Fig. 19.
5. Repeat PLAY-STOP several times and read the average tension.
6. The standard take-up tension should be 30 ~ 70 g.cm.
   If take-up tension is not within these limits;
   a) Clean main belt, take-up reel and all parts which contact them with a cotton swab moistened with alcohol, and/or
   b) Switch set to "OFF", remove main belt and make sure that take-up reel and take-up clutch are rotating smoothly.
   c) Change take-up clutch tension by turning the friction spring under reel table, as shown in Fig. 20, and/or
   d) Replace take-up clutch.

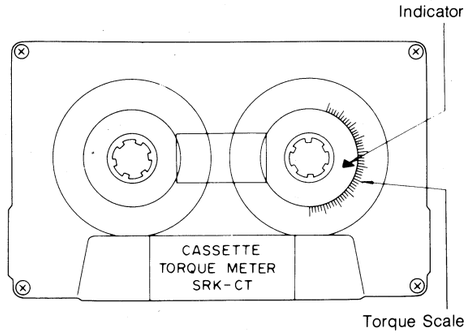


FIG. 19

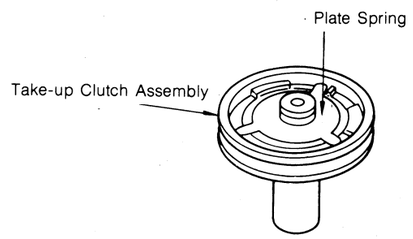


FIG. 20

DOLBY NOISE REDUCTION SYSTEM

GENERAL DESCRIPTION

The Dolby B-Type Noise Reduction System is used in this equipment, which reduces the level of background noise introduced during recording without changing the tone of audio signal.

METHOD OF DOLBY SYSTEM

Signal deviation of Dolby System is shown in Fig. 21.
Low level signal is recorded by boosting and is played back by attenuating as illustrated in the figure.
For example, following a level in Fig. 21:

1. When −30 dB REC signal is applied.
2. It is boosted to −20 dB and recorded on a magnetic head. [ENCODE]
3. Playing back this recorded tape (at −20 dB).
4. The output signal is boosted by Dolby System and reproduced at −30 dB, the same level as recorded. [RECODE]

Fig. 18 shows the boosting frequency characteristics. Generally, the signal deviation increases in proportion to the frequency.
At playback, the characteristics are curved symmetrically against the recording curve and the overall REC and PLAY curve flattens as shown in Fig. 23. This 0 dB is called Dolby Level, which is the flux level of the cassette tape and standardized at the point of 200 pwb/mm, and it is indicated by +3 VU on the VU meter of this equipment.

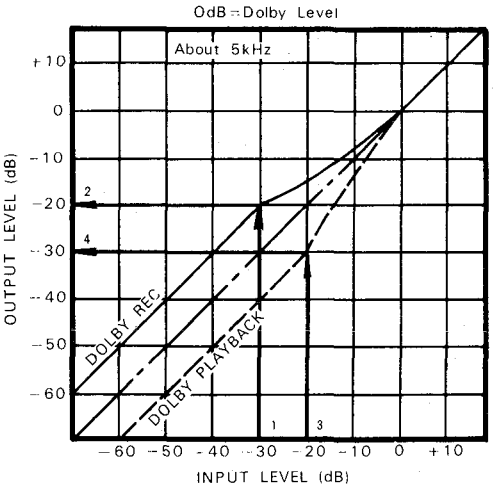


FIG. 21

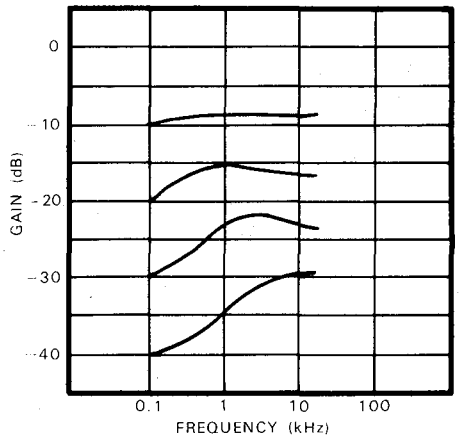


FIG. 22

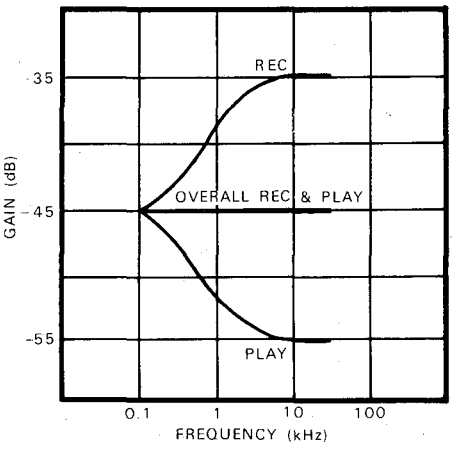


FIG. 23

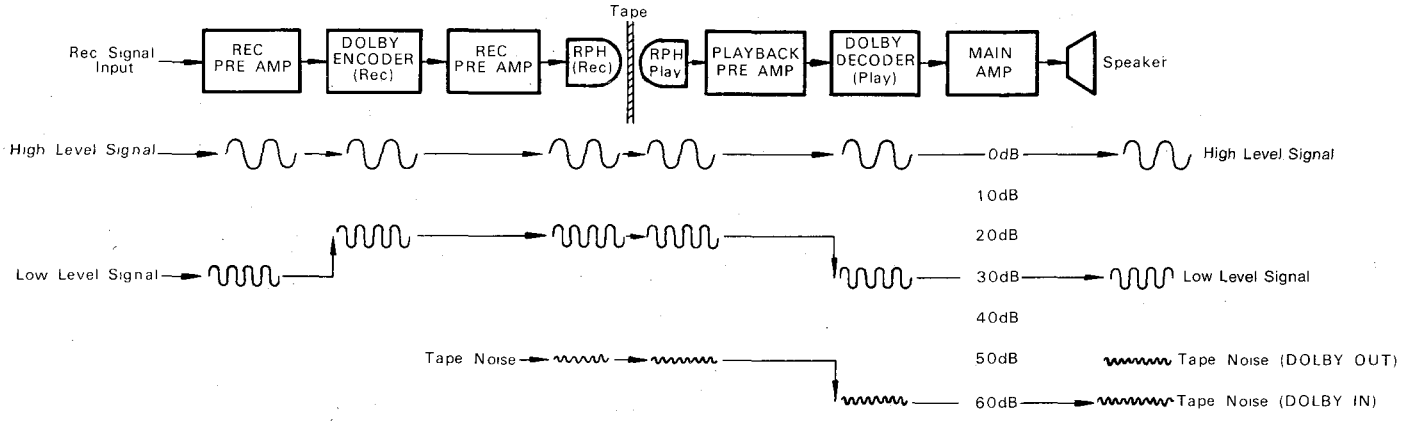


FIG. 24

DOLBY NOISE REDUCTION SYSTEM

PRINCIPLE OF NOISE REDUCTION

Much of the audible noise of a tape recorder is a hiss noise of high and medium frequency created when recording on a magnetic tape while some of it is playback amplifier noise.
A high input signal level suppresses noise but a low input signal level decreases S/N ratio and noise is easily heard.
For solving this problem as shown in Fig. 24, the Dolby System operates by boosting a low-level, high and medium frequency approx. 10 dB when recording, and attenuating the same signal in a complementary manner during playback.
During this process, the hiss noise of high and medium frequency and the amplifier noise are suppressed approx. 10 dB.
Fig. 25 shows noise reduction in Dolby IN/OUT.

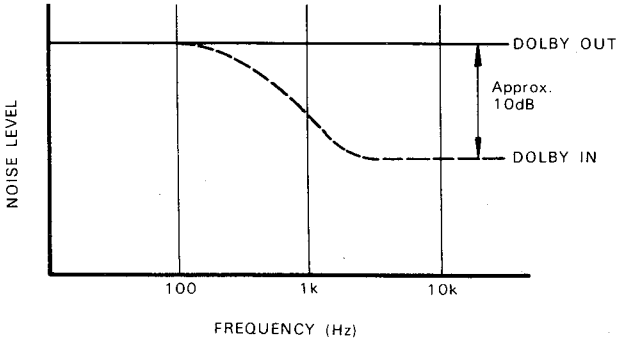


Fig. 25

CIRCUIT OPERATION

The operation of Noise Reduction System is shown in the block diagram of Fig. 26. By turning ST1, ST8, S10-4 and ST11 to REC/PLAY, this circuit operates on ENCODE/DECODE.
[ENCODE] : ST1, ST8 and ST11 in REC position.
Recording signal is applied to REC AMP and passes through AMP "A" of Dolby IC and the low-pass-filter "LPF", and then it enters AMP "B". LPF attenuates unwanted frequencies such as tape recorder bias or FM MPX sub. carrier signals to the level which will not influence the Dolby circuit operation. The output signal of AMP "B" is divided into two paths; one is directly supplied to ADDER "E", which is called a direct signal, while the other controls the noise reduction signal. This signal, passing through ST11, S10-4, high-pass-filter "HPF", variable resistance "F" and AMP "C", enters ADDER "E" and increases the direct signal.
As a result, REC signal from INVERTER "K" is boosted.
[DECODE] : Essentially the same circuitry.
ST1, ST8 and ST11 in PLAY position.
Playback signal from the playback head "RPH" is aplied to PLAYBACK PRE AMP and passes through ST8, AMP "A" of Dolby IC, "LPF" and AMP "B", and then it enters ADDER "E" as the direct signal. One part of output signal from INVERTER "K", passing through ST11, is supplied to MAIN AMP, and the other, as Noise Reduction Signal, passes through S10-4, "HPF".
Variable Resistance "F" and AMP "C", are applied to ADDER "E" in opposite phase. As a result, the level of the playback signal is attenuated. This circuit operates to boost at REC position [ENCODE] and to attenuate at PLAY position [DECODE].
"G" is the rectifying and smoothing circuit of Noise Reduction Signal and controls Variable Resistance "F". And "F" and "HPF" compose the dynamic high pass filter, and control the boosting and attenuating degree of high and medium frequency in response to the signal level (Figs. 22 and 23). "T" is the circuit setting the response time of Dolby.

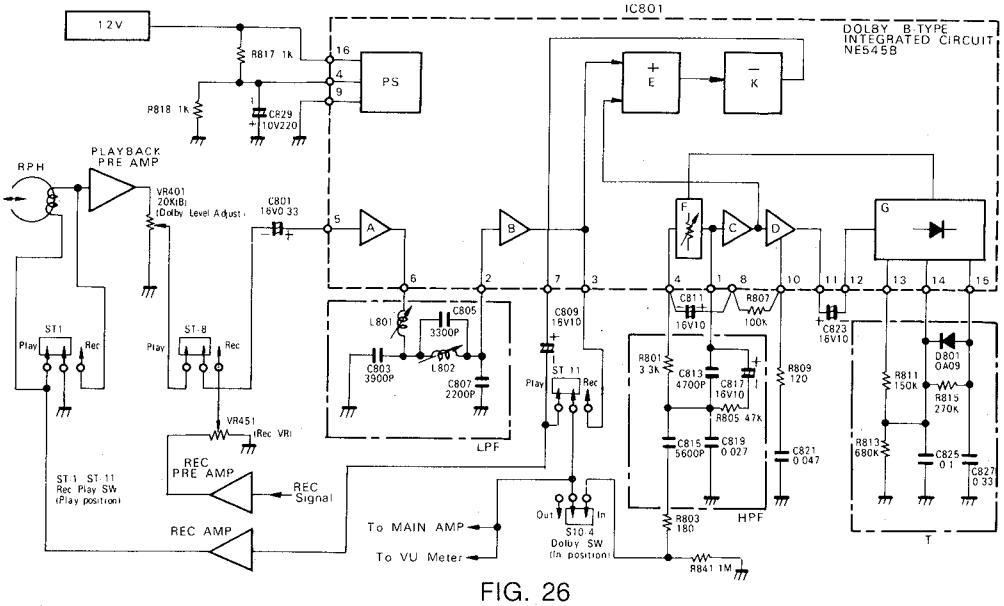


FIG. 26

EXPLODED VIEW OF RECORD PLAYER (SAP925DP)

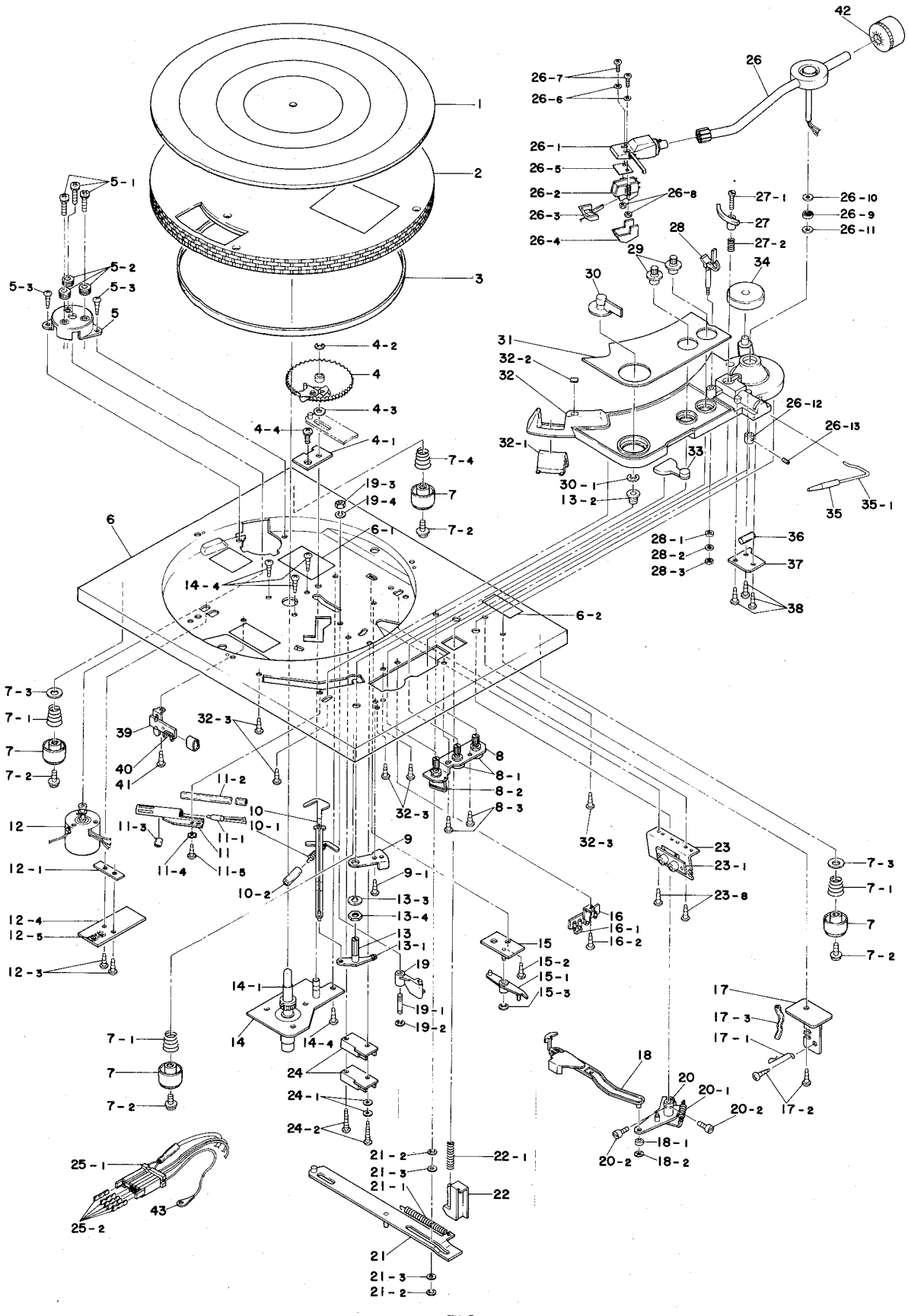


FIG. 27

SERVICING THE RECORD PLAYER

HEADSHELL/CARTRIDGE REPLACEMENT

1. Remove headshell/cartridge fixing nut by turning it clockwise and pull out headshell/cartridge from pickup arm, as shown in Fig. 28.
2. Install a new headshell/cartridge to pickup arm.

NOTE:
Correct stylus position can be obtained by relocating the cartridge, as shown in Fig. 29.

STYLUS REPLACEMENT

1. Lift pickup arm to a position that will make the stylus accessible.
2. Gently remove worn stylus and replace it with a new one, as shown in Fig. 30.

LUBRICATION

The record player has been thoroughly lubricated at the factory and under normal use should not require additional lubrication. When replacing some parts, however, it may be necessary to lubricate the parts as specified.
(Apply grease to Ⓖ as shown in Figs. 32 and 33.)

NOTE:
Do not allow grease to touch motor pulley, belt and turntable.

STYLUS PRESSURE ADJUSTMENT

1. Release pickup arm from its seated position. Place a record on the turntable. Then, balance the pickup arm by turning in or out the balance weight until the stylus is leveled to the surface of the record (as viewed from the turntable unit side).
2. Set the stylus pressure dial to "0", and since the specified stylus pressure of the cartridge is 2.0 grams, set the balance weight dial to "2" by turning the weight counterclockwise, as shown in Fig. 31.

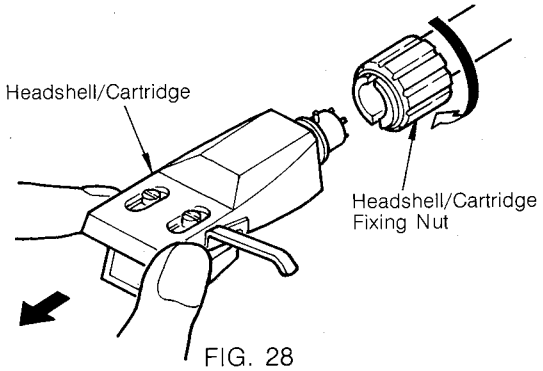


FIG. 28

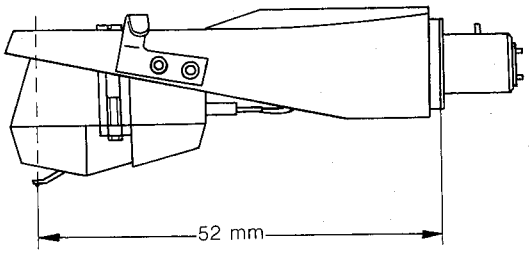


FIG. 29

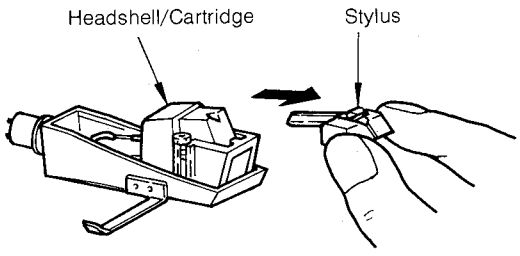


FIG. 30

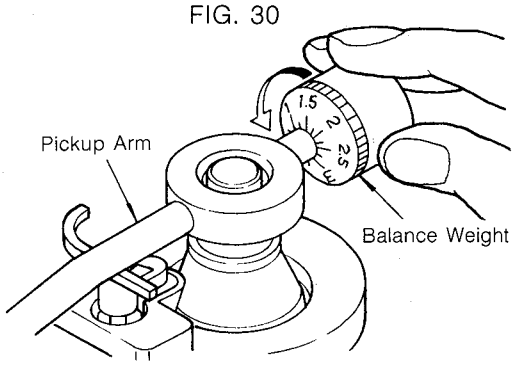


FIG. 31

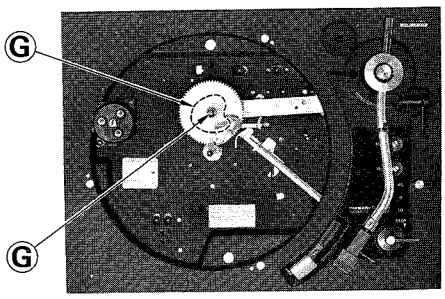


FIG. 32

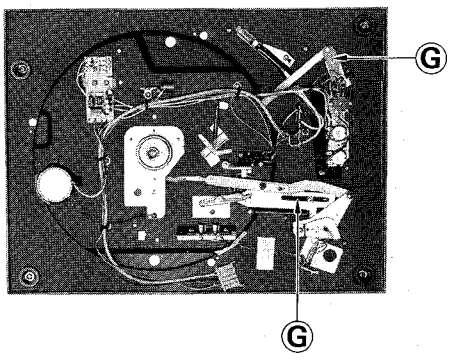


FIG. 33

FM "SENSOR" TOUCH PRESET TUNING SYSTEM

GENERAL DESCRIPTION

The FM "Sensor Touch" Preset Tuning System of the equipment is designed for an easy soft touch selection of six stations.
This system is composed of an electronic tuning circuit equipped with varactor diodes and sensing driver circuit using two integrated circuits, IC101 SN94041 and IC102 SN94042.

CIRCUIT OPERATION

The operation of FM "Sensor Touch" Preset Tuning System is shown in Fig. 34.
IC101 SN94041 operates to select the station for MANUAL, P1, P2 and P3, and IC102 SN94042 is for P4, P5 and P6.

When the sensor button of P1 is touched with a finger, the detecting circuit of P1 operates to energize LED driver and channel out circuit and then a LED lights. While applying voltage that is adjusted by VR101 to the varactor diode of the electronic tuning circuit, the station is selected.
Muting circuit enables to decrease selection noise when tuning, by flowing the signal from No. 6 pin of IC101 to TR205.
Hold circuit and reset circuit are provided to lock the selected station when releasing the finger.
Initial Set circuit of IC101 operates to tune the station of P1 preferentially when the equipment power switch is turned ON again after turning OFF.

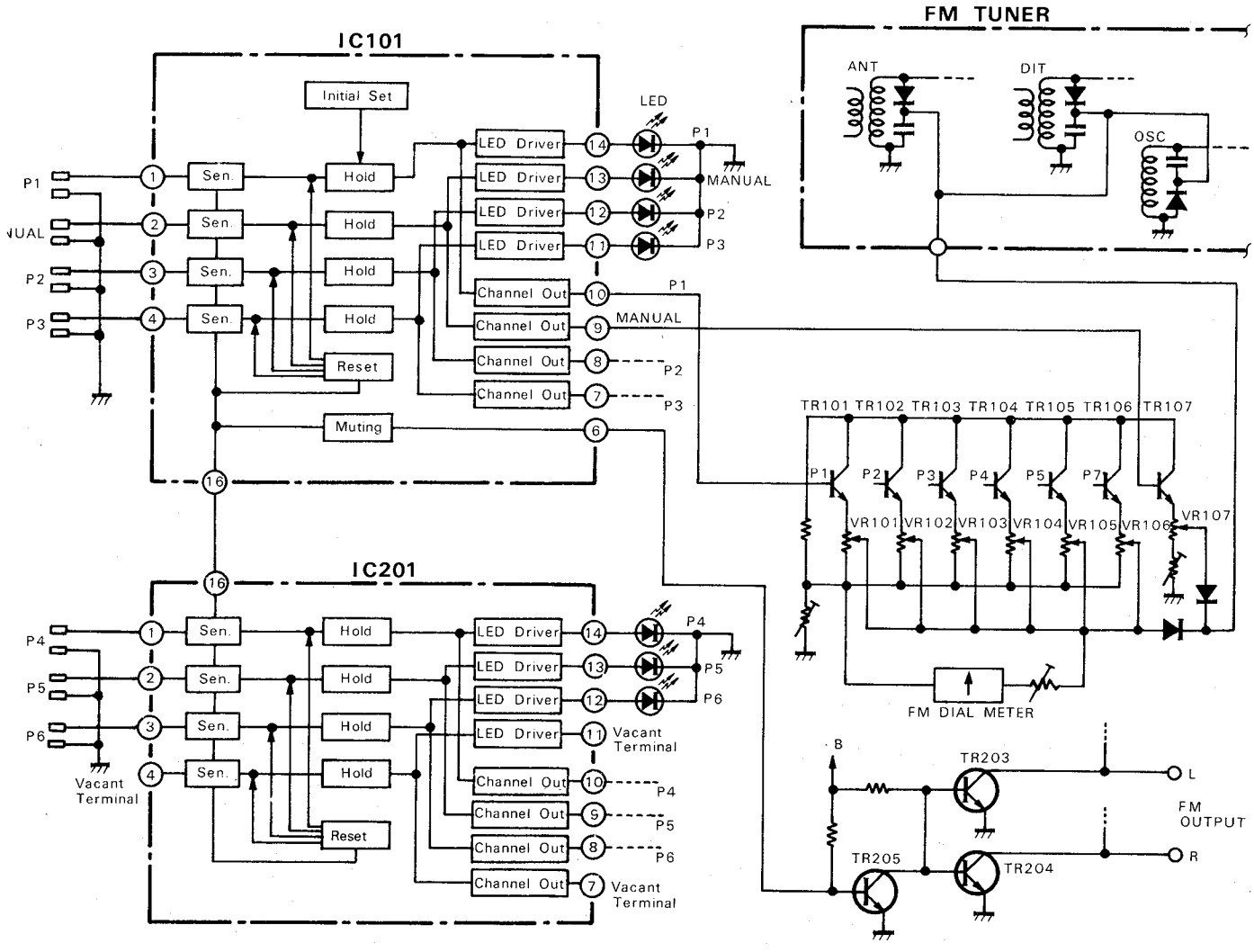


FIG. 34

REPLACEMENT PARTS LIST

NOTES:
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Part numbers composed by bold face are service standard parts and may differ from production parts.
3. Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
4. The term "M. Film" is the abbreviation of Metal Film.
5. The ○ mark indicates the new parts of the factory.

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
		TRANSISTORS		
TR101,102	**2SC1684**	Transistor, FM Tuning	2	
TR103,104	**2SC1684**	Transistor, FM Tuning	2	
TR105,106	**2SC1684**	Transistor, FM Tuning	2	
TR107	**2SC1684**	Transistor, FM Tuning	1	
TR201	**2SC1359**	Transistor, AM Conv.	1	
TR202	**2SC828**	Transistor, Tuning Meter	1	
TR203,204	**2SC1684**	Transistor, Muting	2	
TR205,206	**2SC1684**	Transistor, Muting	2	
TR301	**2SC1327**	Transistor, FM AF Amplifier	1	
TR401,402	**2SC828**	Transistor, VU Meter Amp	2	
TR403,404	**2SC828**	Transistor, Muting	2	
TR405,406	**2SC828**	Transistor, Rec Amplifier	2	
TR407,408	**2SC1327**	Transistor, Mic Amplifier	2	
TR410	**2SC828**	Transistor, Peak Ind Amp	1	
TR411,412	**2SC1327**	Transistor, Tape, EQ Amp	2	
TR413,414	**2SC1327**	Transistor, Tape, EQ Amp	2	
TR501,502	**2SC1327**	Transistor, AF Amplifier	2	
TR503,504	**2SC1327**	Transistor, AF Amplifier	2	
TR601,602	**2SC1327**	Transistor, Phono Amplifier	2	
TR603,604	**2SC1327**	Transistor, Phono Amplifier	2	
TR801	**2SB175**	Transistor, Bias OSC	1	
TR802	**2SB324**	Transistor, Bias Amplifier	1	
TR803	**2SC828**	Transistor, Pulse Amp	1	
TR804	**2SC828**	Transistor, End Sensor	1	
TR805	**2SC1568**	Transistor, End Sensor	1	
TR901	**2SC1383**	Transistor, Ripple Filter	1	
TR902	**2SC1398**	Transistor, Ripple Filter	1	
TR903	**2SC1398**	Transistor, A.V.R.	1	
TR904	**2SC1684**	Transistor, A.V.R.	1	
TR905	**2SC1383**	Transistor, A.V.R.	1	
TR906	**2SC1684**	Transistor, A.V.R.	1	
		INTEGRATER CIRCUITS		
IC101	SN94041N	IC, Manual/Preset	1	
IC102	SN94042N	IC, Manual/Preset	1	
IC201	**AN217**	IC, FM AM IF	1	
IC301	LA3350A	IC, FM MPX	1	
IC701,702	STK025G	IC, Power Amplifier	2	
IC801,802	NE545B	IC, Dolby	2	
		DIODES		
D101,102	MA150	Diode, FM Tuning	2	
D103,104	MA150	Diode, FM Tuning	2	
D105,106	MA150	Diode, FM Tuning	2	
D107,108	MA150	Diode, FM Tuning	2	
D201	**2OA90**	Diode, AM AGC	1	
D202,203	2OA90	Diode, FM DET	2	
D204	**2OA90**	Diode, Tuning Meter	1	
D205	VD1123	Diode, Tuning Meter	1	
D206	**2OA90**	Diode, AM DET	1	
D207,208	**2OA90**	Diode, FM AGC	2	
D209	**2OA90**	Diode, A.O.C.	1	
D301,302	MA150	Diode, Switching	2	
D401	2OA90	Diode, Rect	1	
D402	2OA90	Diode, Rect	1	
D405	2OA90	Diode, Rect	1	
D406	2OA90	Diode, Rect	1	
D407	2OA90	Diode, Rect	1	
D408	2OA90	Diode, Rect	1	
D409	SR103D	Diode, Peak Indicator (PL12)	1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
D801	OA91	Diode, Rect	1	
D802	OA91	Diode, Rect	1	
D803	VD1121	Diode, AOC	1	
D804	**2OA90**	Diode, Rect	1	
D805	**2OA90**	Diode, Rect	1	
D806	MA1075	Diode, Stabilizer	1	
D807	10D1	Diode, Damper	1	
D901	S1RBA10	Diode, Rect	1	
D902	**MA1091**	Diode, Stabilizer	1	
D903,904	S3V20	Diode, Rect	2	
D905,906	S3V20	Diode, Rect	2	
D908	10DC1	Diode, Rect	1	
D909	**MA1130**	Diode, Stabilizer	1	
D911	**MA1130**	Diode, A.V.R.	1	
D912	MA1062	Diode, A.V.R.	1	
D914	VD1223	Diode, A.V.R.	1	
THERMISTER				
TH801	RRT103	Thermister	1	
LAMPS AND FUSES				
PL1	XAMR53X300	Dial Lamp	1	
PL4,5	XAMR53X300	Meter Lamp	1	
PL6	**XAMR53X300**	Rec Lamp	1	
PL7	**XAMR53X300**	CrO_2 Lamp	1	
PL8	**XAMR53X300**	Dolby Lamp	1	
PL9	XAMR53X300	Stereo Eye	1	
F1	XBAS2A2001	Fuse 2AT	1	
F2	XBAS2A1004	Fuse 1 AT	1	
F3	XBA2C50TR0	Fuse 5AT	1	
F4	XBA2C50TR0	Fuse 5AT	1	
F5	XBAS2A1004	Fuse 1AT	1	

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
METER				
M1,2	SSM62	VU Meter	2	
M3	SSM68	Tuning Meter w/Lamp (PL2)	1	
M4	SSM70	FM Dial Meter w/Lamp (PL3)	1	
COILS AND TRANSFORMER				
L201,202	SLF6G28-O	Coil, MW and LW Ferrite Antenna	1	
L203	SLA3M6-M	Coil, SW Antenna	1	
L204	SLO2M6-M	Coil, MW Oscillator	1	
L205	SLO1M4-M	Coil, LW	1	
L206	SLO3M2-M	Coil, SW	1	
L401,402	SLQU222-2Y	Coil, Rec EQ	2	
L403,404	SLQV393-4Y	Trap Coil	2	
L801,802	SLQC363-2K	Coil, 19 kHz (36 mH) Trap	2	
L803,804	SLQC233-2K	Coil, 38 kHz (23 mH) Trap	2	
L805	SLO9Z10-K	Coil, Bias Oscillator	1	
L806,807	ELQ250A999	Coil, Choke	2	
L901,902	SLQY35S-2S	Coil, RFC	2	
T201	SLI2M102	AM 1st IFT	1	
T202	RLI2M402	AM IFT	1	
T203	RLI4M501-M	FM Disc	1	
T204	RLI4M502-M	FM Disc	1	
T801	SLT6E2-D	Output Transformer (Bias OSC)	1	
T901	SLT5Z6-W1	Power Transformer	1	
CF201,202	RVFCF10M12CR	FM Ceramic Filter	2	
CF203	RLI9W104P-T	AM Ceramic Filter	1	UK only
CF203	RLI7W105R-T	AM Ceramic Filter	1	Except UK
VARIABLE CAPACITORS				
CT201~206	SCV3T12S	Trimmer Capacitor	2	
CV201,202, VR107	SCVC637W112K	Tuning Capacitor, w/Volume	1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
		VARIABLE RESISTORS		
VR101,102	**SVV2**	Pre-set Adjust	2	
VR103,104	**SVV2**	Pre-set Adjust	2	
VR105,106	**SVV2**	Pre-set Adjust	2	
VR108	EVLS3AA00B24	20kB FM Dial Meter Adjust	1	
VR109	EVLS3AA00B14	10kB FM Dial Meter Adjust	1	
VR110	EVLS3AA00B32	300ΩB Pre-set Adjust	1	
VR301	**EVLT0AA00B13**	1kB FM Stereo Separation	1	
VR302	**EVLT0AA00B53**	5kB 19kHz Adjust	1	
VR401,402	EVLS3AA00B24	20kB Dolby Level Adjust	2	
VR403,404	EVLS3AA00B14	10kB Bias Meter	2	
VR405	EVLS3AA00B24	20kB Dolby Level Adjust	1	
VR451,452	EVH6UA363A24	20kA Rec Level Adjust	2	
VR461,462	**EVLT0AA00B53**	5kB Rec Current Adjust	2	
VR501,502	EWK8EA331A54	50kA Bass, Treble Control	2	
VR503,504	EWK8EA331A54	50kA Bass, Treble Control	2	
VR505,506	EWFN3AK30A54	50kA Volume Control	2	
VR507	EVHOUA363G54	50kG Balance Control	1	
VR801	EVLS3AA00B13	1kB OSC Out Adjust	1	
VR802,803	EVLS3AA00B14	10kB Bias Meter	2	
VR901	EVLS3AA00B13	1kB Voltage Adjust	1	
		SWITCHES		
S1	ESB76122	Switch, Power	1	
S2	ESE3742	Switch, Line Selector	1	
S3,4,5	SSH304	Switch, Tape Monitor, Loudness, High Filter Switch	1	
S6	SSS28	Switch, WDS	1	
S10	SSS82	Switch, Dolby	1	
S11	SSS80	Switch, Bias Nor-CrO_2	1	
S12	SSS84	Switch, EQ Nor-CrO_2	1	
S13	SSP20	Switch, Lead	1	
S14	SSH606	Switch, Function	1	
S16	SSH58	FM Mono, Auto Selector	1	○
S17	SSH60	Speaker Selector	1	○
ST1～12	ESD86021	Switch, Rec/Play	1	
SX1	ESA20114B	Remote Wire Assembly	1	
		TUNER		
	SSD5002-1	FM RF Tuner	1	
		COMPONENT COMBINATIONS		
Z201	**EXA5DL04C**	Component Combination, FM Det	1	
Z202	**EXAF203Z471**	Component Combination, AM Det	1	
Z901,902	RXAF103Z22EY	Component Combination, Rectifier	2	
Z903,904	RXAF103Z22EY	Component Combination, Rectifier	2	
Z905	RXAF103Z22EY	Component Combination, Rectifier	1	
		CABINET		
CA1	SKA1786	Cabinet Assembly	1	○ For UK, GE
	SKA1784-1	Cabinet Assembly	1	○ Except UK, GE
CA1-2	(SHG9058)	Rubber Cushion, Dust Cover	(2)	For UK, GE
	(SHG9058-1)	Rubber Cushion, Dust Cover	(2)	Except UK, GE
CA2	SYE446	Cassette Cover Assembly	1	
CA2-1	SGX996	Cassette Cover Ornament	1	
CA3	SKU3180	Rear Board	1	○
CA4	SYE466-1	Cassette Lid Assembly	1	For UK, GE
	SYE466	Cassette Lid Assembly	1	Except UK, GE
CA5	SGE684	Dust Cover	1	
CA6	SHS3018	Felt, Foot	1	
CA7	SYL6-1	Foot Assembly	3	
CA8	SYU304	Bottom Board Assembly	1	
CA9	SBC206	Button, Reset	1	
CA10	SXE108	Hook Assembly	1	
CA11	SBH9036	Hinge Substance (Left)	1	
CA12	SBH9038	Hinge Substance (Right)	1	
CA13	SBH9040	Cap	2	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
CA14	SYP350-1	Escutcheon Assembly	1	○ For UK, GE
	SYP350	Escutcheon Assembly	1	○ Except UK, GE
CA15	SBN730	Knob Tuning	1	
CA16	SBN714K	Knob Volume Control and Others	4	
CA17	SBC196	Button, Power	1	
CA18	SBC198	Push Button	9	
CA19	SHR9044	Blind	1	
CA20	SWE118	Sensor Assembly	1	
CA21	SBN724K	Knob Rec	2	
CA22	SUV122	Headphone Jack Cover	1	
CA23	SUS184-1	Spring, Push Button	10	
CA24	SYE470	Push Button	2	○
		CHASSIS		
CH1	SDA182	Pointer Holder	1	
CH2	SDP592	Pointer	1	
CH3	SHG950-2	Rubber, Lamp	1	
CH4	RHG211	Rubber, Lamp	2	
CH5	SDD46K	Drum	1	
CH6	RDS4170A	Spring, Drum	1	
CH7	RDR20	Roller	3	
CH8	RDR23	Roller	4	
CH9	RDY36	Shaft, Roller	5	
CH10	RNW150-2	Washer, Roller	6	
CH11	SHR134	AC Cord Clamp	2	Except GE
	SHR112	AC Cord Clamp	1	GE only
CH12	SDT9304	Tuning Shaft	1	
CH13	RDY32	Shaft, Roller	1	
CH16	SHG9102	Rubber, Lamp Holder	1	
CH17	SJA116	AC Cord	1	UK only
	SJA88	AC Cord	1	Except UK, GE
	RJA10A	AC Cord	1	GE only
CH18	RHG3-1	Rubber, Line ANT	1	
CH19	SHG958	Rubber, Stereo Eye	1	
CH20	SJF110	Fuse Holder	12	
CH21	RJJ78	Mic Jack	2	

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
CH22	SNE420	Nut, Mic Jack	2	
CH23	SJS9202-1	DIN FM Terminal	1	
CH24	SJS9206-1	DIN AM Terminal	1	
CH25	SJF9028	DIN SPRR Terminal	1	
CH26	SJF9102	DIN 5P Terminal	1	
CH27	RJJ108ZA-H	Headphone Jack	1	
CH28	SWK202	3P Connector Assembly	1	
CH29	SWK200	5P Connector Assembly	1	
CH30	SWK230	5P Connector Assembly	1	
CH31	SWK232	5P Connector Assembly	1	
CH32	SWP56	Lead Assembly, Phone	2	
CH33	XYN4+C12S	Screw 4 mm × 12	4	
CH34	XWE4E10	Washer 4ϕ	4	
CH35	XSW3+8B	Screw 3 mm × 8	4	
CH36	XTW3+10FZK	Screw 3 mm × 10	5	
CH37	XMC27+10FZK	Screw 2.7 mm × 10	2	
CH38	XYN26+C8	Screw 2.6 mm × 8	2	
CH39	XWE26D6	Washer 2.6ϕ	2	
CH40	XTV3+8FZK	Screw 3 mm × 8	5	
CH41	XTV3+8BR	Screw 3 mm × 8	7	
		ACCESSORIES		
A1	SQX5954	Instruction Book	1	○ UK only
	SQX5944	Instruction Book (SEV, OVE, GF, GF-2, SDF)	1	○ Except UK
A3	SJM2	Mic Stand	2	Except UK
A4	WN2201N	Mic	2	Except UK
A5	SPT1HCZNRAZ	Demonstration Tape	1	Except UK
A6	SJP9210	Plug Adapter, Power	1	GE only
A7	SJP9212	Plug Adapter, Power	1	GE only
		PACKING		
PA1	SPN3076	Carton, Inner	1	○
PA2	SPN2576-1	Pad, Front	1	○
PA3	SPN2578	Pad, Rear	1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
PA4	SPN2580-1	Pad, Upper	1	
PA6	SPH6050	Sheet, TT Protection	1	
PA7	SPN2362-1	Accessory Case A	1	
PA8	SPN2364	Accessory Case Cover	1	
PA9	SNE222	Screw, Player Fixing	3	
PA10	SNW601	Washer	3	
		CASSETTE TAPE DECK (SJD80)		
2	SBC234	Push Button	7	
3	SMQ1232-1	REC Safety Lever w/Spring	1	
4	SMQ662	Spring, REC Safety Lever	1	
5	SMQ1706	Stopper, REC Safety Lever	1	
6	SJH34	R/P Head	1	
7	SJH14	Erase Head	1	
8	SMQ678	Spring, R/P Head and Flywheel Retainer	2	
9	SMQ1360	Spring A, Head Panel	2	
10	SMQ1362-1	Head Base	1	
11	SMQ1388	Eject Stop Lever w/Spring	1	
12	SMQ1690	Guide Pin (R)	1	
13	SMQ462	Spring, Supply Reel	1	
14	SMQ1658	Pressure Roller Assembly	1	
15	SMQ1660	Spring, Pressure Roller	1	
16	SMQ1626	Reel Table	2	
17	SMQ1624	Tape Counter	1	
18	SMQ1588	Belt, Tape Counter	1	
19	SMQ1354	Brake Arm	1	
20	SMQ1358	Spring, Brake Arm	1	
21	SMQ1818	Spring, Tape Holder	1	
22	MHX5A2RSL	Motor	1	
23	SMQ1662	Motor Pulley	1	
24	SMQ716	Rubber Cushion, Motor	3	
25	SMQ718	Spacer, Motor	3	
26	SMQ1664	Switch	2	
27	SMQ1396	Eject Slide Lever w/Spring	1	
28	SMQ1374	Spacer A, Eject Slide Lever	2	

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
29	SMQ1398	Spacer B	4	
30	SMQ1672-1	Clutch Assembly w/Spring	1	
31	SMQ1674-1	Flywheel Shaft	1	
32	SMQ1676	Hold Plate, Flywheel Shaft	1	
33	SMQ148	Washer, Oil Thrower	2	
34	SMQ1682	Nylon Washer	1	
35	SMQ1686	Flywheel	1	
36	SMQ1688	Belt, Main	1	
37	SMQ1678	Retainer, Flywheel	1	
38	SMQ1382-1	FF. Rew Arm Assembly w/Spring	1	
39	SMQ1406	Operation Plate, Brake	1	
40	SMQ1408	Rewind Arm w/Spring	1	
41	SMQ1386	Rewind Idler	1	
42	SMQ1410	Pause Lever	1	
43	SMQ1412	Spacer, Pause Lever	1	
44	SMQ1414	Pause Slide Lever A w/Spring	1	
45	SMQ1416	Pause Slide Lever B	1	
46	SMQ1376	Pause Click Lever	1	
47	SMQ1418	Spring, Pause Click Lever	1	
48	SMQ1668	Bracket, Muting Switch	1	
49	SMQ1666	Bracket, Motor Switch	1	
50	SMQ1650	REC Slide Lever	1	
51	SUS208-1	Spring Plate, REC Switch	1	
52	SMQ1680	Thrust Pad for Flywheel	1	
53	SMQ1670	Operating Plate, Muting Switch	1	
54	SMQ1702	Rewind Lever	1	
55	SMQ1432	FF. Lever	1	
56	SMQ1434	Nylon Washer	1	
57	SMQ1436-1	Auto Stop Lever	1	
58	SMQ1684	Spacer, Auto Stop Lever	1	
59	SMQ1530-1	Play Lever	1	
61	SMQ1444	Spring B, Head Panel	1	
62	SMQ1526	Auto Stop Adjust Arm w/Spring	1	
63	SMQ1654	Push Button Frame Assembly	1	
65	SMQ1638	REC Lever Spring	1	
70	SMQ1696	Solenoid Bracket	1	
71	SMQ1698	Pause Switch	1	
72	SMQ1692	Solenoid Assembly	1	
73	SMQ1694	Shaft, Solenoid	1	
100	XSN2+8	Screw 2 mm × 8	4	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
101	XSN2+10	Screw 2 mm × 10	3	
102	XYN2+C4	Screw 2 mm × 4	4	
103	XYN2+C5	Screw 2 mm × 5	3	
104	XSN2D6	Screw 2 mm × 6	1	
105	XSN26+6	Screw 2.6 mm × 6	4	
106	XSN26+7	Screw 2.6 mm × 7	1	
107	XSN26+10	Screw 2.6 mm × 10	1	
108	XYN26+C4	Screw 2.6 mm × 4	2	
109	XYN26+C5	Screw 2.6 mm × 5	1	
110	XYN26+C6	Screw 2.6 mm × 6	4	
111	XYN26+C8	Screw 2.6 mm × 8	2	
112	XSB26+4	Screw 2.6 mm × 4	1	
113	XSB26+6	Screw 2.6 mm × 6	3	
114	XSS3+5S	Screw 3 mm × 5	2	
115	XRT2×3	Rivet	1	
120	XWE2A6	Washer 2φ	1	
121	XWE26D7	Washer 2.6φ	4	
150	XUC12FT	Circlip 1.2φ	2	
151	XUC15FT	Circlip 1.5φ	4	
152	XUCS19	Circlip 1.9φ	1	
153	XUC2FT	Circlip 2.0φ	2	
154	XUC25FT	Circlip 2.5φ	1	
155	XUC32FT	Circlip 3.2φ	1	
156	XUC4FT	Circlip 4φ	2	
		RECORD PLAYER (SAP925DP)		
1	SFTG120-01	Rubber, Turntable	1	
2	SFTE023L01	Turntable	1	
3	SFGB321-1	Belt	1	
4	SFUG825C01A	Main Gear Assembly	1	
4-1	SFUP827-1	Washer	1	
4-2	XUC5FT	Circlip 5φ	1	
4-3	XUC5FT	Circlip 5φ	1	
4-4	XTV3+6B	Screw 3 mm × 6	1	
5	SFUM023L01	Case, Motor	1	
5-1	SFXG023L01	Mounting Shaft, Motor	3	
5-2	SFGC020L01	Rubber, Cushion	3	
5-3	XTV3+8B	Screw 3 mm × 8	2	
6	SFBP925P01E	Panel Assembly	1	
6-1	SFNN825-04	Paper, Name	1	
6-2	SFNH018X01	Label, Stylus Replacement	1	
7	SFGC925D01	Rubber, Panel Cushion	4	
7-1	SFQC925S01	Spring, Panel Cushion	3	
7-2	XSN4+6S	Screw 4 mm × 6	4	
7-3	XWE8F18BW	Washer 8φ	2	
7-4	SFQC925S02	Spring, Panel Cushion	1	
8	SFUP925P01A	Mounting Plate, Switch	1	
8-1	EVHBOAK15B53	VR, Speed Adjust	2	
8-2	ESRE123K20D	Switch, Speed Selector	1	
8-3	XTV3+8B	Screw 3 mm × 8	2	
9	SFUP925D02	Stop Plate, Cut Lever	1	
9-1	XTV3+6B	Screw 3 mm × 6	1	
10	SFUM623-6	Cut Plate	1	
10-1	SFQH831-1	Return Spring, Cut Plate	1	
10-2	SFEB5BT	Vinyl Tube	1	
11	SFUP023L08	Heat Sink	1	
11-1	SFDNE2HUWMA3	Neon Tube	1	
11-2	SEEB82UT	Vinyl Tube	1	
11-3	SFEB3UT	Vinyl Tube	1	
11-4	XWC3BFY	Washer 3φ	1	
11-5	XTV3+6B	Screw 3 mm × 6	1	
12	SFMH825B01R	Motor w/Pulley	1	
12-1	SFUZ825H01	Insulating Paper, Motor PCW	1	
12-3	XTV3+8B	Screw 3 mm × 8	2	
12-4	FE-EGA462	Motor P.C.B. Assembly	1	
12-5	EVN31AA00B24	Variable Resistor	2	
13	SFXL925D01E	Cut Lever Shaft Assembly	1	
13-1	SFGH825C01	Rubber, Shock Absorption	1	
13-2	SFXB530-1	Boss, Cut Lever	1	
13-3	XWA9B	Washer, 9φ	1	
13-4	SFXN530R1	Nut	1	
14	SFTU925-01A	Turntable Bearing Assembly	1	
14-1	SFTJ929-01E	Turntable Shaft Assembly	1	
14-2	SFYB5-32	Ball	1	
14-3	SFXG829T01	Screw	1	
14-4	XTV3+6B	Screw 3 mm × 6	3	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
15	SFUP925D03E	Turntable Shaft Mounting Plate Assembly	1	
15-1	SFUM023L02	Pressure Plate, Switch	1	
15-2	XTV3+6B	Screw 3 mm × 6	1	
15-3	XUC3FT	Circlip 3ϕ	1	
16	SJRA301	Lug, 4P	1	
16-1	ERG1ANJ822	Resistor 8.2k ohm	1	
16-2	XTV3+6B	Screw 3 mm × 6	1	
17	SFUP829E01	Bracket, PU Lead Protection	1	
17-1	SFQS925D01	Spring, Lead Wire	1	
17-2	XTV3+6B	Screw 3 mm × 6	2	
17-3	SFEB4BT	Vinyl Tube	1	
18	SFUC623-1E	Moving Plate Assembly	1	
18-1	SFX0925D01	Collar	1	
18-2	CSTW3	Stop Ring	1	
19	SFUM925D01	Actuater	1	
19-1	SFXJ925D01	Shaft, Actuater	1	
19-2	XUC3FT	Circlip 3ϕ	1	
19-3	XNG3BS	Nut 3ϕ	1	
19-4	XWA3BFR	Washer 3ϕ	1	
20	SFPAB22009K	PU Mounting Plate Assembly	1	
20-1	SFQH829T05	Return Spring, Mounting Plate	1	
20-2	XXA3D6S	Screw 3 mm × 6	2	
21	SFUB827-01E	Drive Plate Assembly	1	
21-1	SFQH623-1	Return Spring, Drive Plate	1	
21-2	XUC4FT	Circlip 4ϕ	2	
21-3	SFXW028-01	Washer	2	
22	SFPJL22002K	Lift Bar Assembly	1	
22-1	SFPSP3500	Spring, Lift Bar	1	
23	SFUP925P02E	Mounting Bracket, PU Socket	1	
23-1	SJF3201	Socket, Pin Jack	1	
23-8	XTV3+6B	Screw 3 mm × 66	2	
24	SFDSAH75602	Micro Switch	2	
24-1	SFXW925D01	Washer	2	
24-2	XTN3+30B	Screw 3 mm × 30	2	
25-1	SJS9502	Housing, Plug	1	
25-2	SJT726	Pin, Plug	5	
26	SFP-AM22005K	Pickup Arm Assembly	1	
26-1	SFPCC3501K	Shell	1	
26-2	EPC270CX	Cartridge w/Stylus	1	

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
26-3	EPS270ED	Stylus	1	
26-4	SFCNC8600	Cover, Stylus	1	
26-5	SFPZB3307	Spacer C	1	
26-6	SFPEW9601	Washer	2	
26-7	SFPEV9801	Screw	2	
26-8	SFPEN3302	Nut	2	
26-9	SFUP890B01E	Bearing, Pickup	1	
26-10	SFPEW3500	Thrust Washer	1	
26-11	SFPEW22001	Thrust Washer	1	
26-12	SFPJD22004	Stop Ring	1	
26-13	XXE303FNS	Screw	1	
27	SFKR925S01E	Lift Assembly	1	
27-1	SFXG829-1	Screw, Lift Height Adjustment	1	
27-2	SFQA829-03	Spring, Lift Escape	1	
28	SFPRT22001K	Arm Rest Assembly	1	
28-1	XWE26E75EW	Washer 2.6ϕ	1	
28-2	XWA26B	Washer 2.6ϕ	1	
28-3	XNG26HBN	Nut 2.6ϕ	1	
29	SFKT130-01A	Knob, Speed Adjust	2	
30	SFKT925-01E	Knob, Cut	1	
30-1	XUC5FT	Circlip, 5ϕ	1	
31	SFKK925P01	Ornament, Arm Base	1	
32	SFPKD22015	Arm Base	1	
32-1	SFUM023L05	Cover, Neon	1	
32-2	SFKK023L02	Name Plate, Storoboscope	1	
32-3	XTV3+8B	Screw 3 mm × 8	5	
33	SFKT925D01E	Knob, Speed Select	1	
34	SFWE154A1	45 RPM Adaptor	1	
35	SFP-AB12002	Button, Lift	1	
35-1	SFP-JL22003	Lever, Lift	1	
36	SFP-GM22001	Rubber, Cueing	1	
37	SFP-AB22006	PCB, Lift	1	
38	XTN3+6B	Screw 3 mm × 5	3	
39	SFER3B	Lug, 3P	1	
40	ERD25TJ333	Resistor, 33k ohm	1	
41	XTV3+8B	Screw 3 mm × 8	1	
42	SFP-WG22001K	Balance Weight Assembly	1	
43	SFEZ16083	Lug, Earth	1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
		SPEAKER SYSTEM (SB309L)		
1	SYK1562	Speaker Box Assembly	2	
2	SYB186	Baffle Assembly	2	
3	RGB159A	Badge	2	
4	EAS5HH46S	Speaker 5 cm	2	
5	EAS9PH45S	Speaker 9 cm	2	
6	EAS20PL128S	Speaker 20 cm	2	
7	SPN2876	Carton Inside	1	
8	SPN2788	Pad	2	
9	SPN2792	Soft Cover	3	
10	SPH6054	Speaker Sheet	2	
		RESISTORS		
R101,102	**ERD25TJ105**	Carbon 1MΩ 1/4W ±5%	2	
R103,104	**ERD25TJ105**	Carbon 1MΩ 1/4W ±5%	2	
R105,106	**ERD25TJ105**	Carbon 1MΩ 1/4W ±5%	2	
R107	**ERD25TJ105**	Carbon 1MΩ 1/4W ±5%	1	
R108	**ERD25TJ471**	Carbon 4.7kΩ 1/4W ±5%	1	
R109	**ERD25TJ472**	Carbon 4.7kΩ 1/4W ±5%	1	
R110,111	**ERD25TJ472**	Carbon 4.7kΩ 1/4W ±5%	2	
R112,113	**ERD25TJ472**	Carbon 4.7kΩ 1/4W ±5%	2	
R114,115	**ERD25TJ472**	Carbon 4.7kΩ 1/4W ±5%	2	
R116	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R117	**ERD25TJ222**	Carbon 2.2kΩ 1/4W ±5%	1	
R118	**ERD25TJ470**	Carbon 47Ω 1/4W ±5%	1	
	ERG1ANJ470	M. Film 47Ω 1W ±5%	1	For UK, GE
R119	**ERD25TJ220**	Carbon 22Ω 1/4W ±5%	1	Except UK, GE
	ERQ12HJ220	M. Film 22Ω 1/2W ±5%	1	For UK, GE
R120	**ERD25TJ105**	Carbon 1MΩ 1/4W ±5%	1	
R121	**ERD25TJ222**	Carbon 2.2kΩ 1/4W ±5%	1	
R122	**ERD25TJ471**	Carbon 470Ω 1/4W ±5%	1	
R124	**ERD25TJ474**	Carbon 470kΩ 1/4W ±5%	1	
R201	**ERD25TJ331**	Carbon 330Ω 1/4W ±5%	1	
R202	**ERD25TJ472**	Carbon 4.7kΩ 1/4W ±5%	1	
R204	**ERD25TJ101**	Carbon 100Ω 1/4W ±5%	1	
R205	**ERD25TJ221**	Carbon 220Ω 1/4W ±5%	1	
R206	**ERD25TJ152**	Carbon 1.5kΩ 1/4W ±5%	1	
R207	**ERD25TJ332**	Carbon 3.3kΩ 1/4W ±5%	1	
R208	**ERD25TJ153**	Carbon 15kΩ 1/4W ±5%	1	
R209	**ERD25TJ102**	Carbon 1kΩ 1/4W ±5%	1	
R210	**ERD25TJ681**	Carbon 680Ω 1/4W ±5%	1	
R211,212	**ERD25TJ102**	Carbon 1kΩ 1/4W ±5%	2	
R213,214	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	2	
R215	**ERD25TJ104**	Carbon 100kΩ 1/4W ±5%	1	
R216	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R217	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R218	**ERD25TJ104**	Carbon 100kΩ 1/4W ±5%	1	
R219	**ERD25TJ471**	Carbon 470Ω 1/4W ±5%	1	
R220	**ERD25TJ333**	Carbon 33kΩ 1/4W ±5%	1	
R221	**ERD25TJ224**	Carbon 220kΩ 1/4W ±5%	1	
R222	**ERD25TJ682**	Carbon 6.8kΩ 1/4W ±5%	1	
R223	**ERD25TJ104**	Carbon 100kΩ 1/4W ±5%	1	
R224	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R225	**ERD25TJ474**	Carbon 470kΩ 1/4W ±5%	1	
R226,227	**ERD25TJ224**	Carbon 220kΩ 1/4W ±5%	2	
R228	**ERD25TJ220**	Carbon 22Ω 1/4W ±5%	1	
R229	**ERG1ANJ220**	M. Film 22Ω 1W ±5%	1	
R230	**ERD25TJ223**	Carbon 22kΩ 1/4W ±5%	1	
R231	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R232	**ERD25TJ222**	Carbon 2.2kΩ 1/4W ±5%	1	
R233	**ERD25TJ100**	Carbon 10Ω 1/4W ±5%	1	
R234	**ERD25TJ221**	Carbon 220Ω 1/4W ±5%	1	
R235	**ERD25TJ470**	Carbon 47Ω 1/4W ±5%	1	
R236	**ERD25TJ222**	Carbon 2.2kΩ 1/4W ±5%	1	
R237	**ERD25TJ223**	Carbon 22kΩ 1/4W ±5%	1	
R238	**ERD25TJ102**	Carbon 1kΩ 1/4W ±5%	1	
R239	**ERD25TJ333**	Carbon 33kΩ 1/4W ±5%	1	
R240	**ERD25TJ103**	Carbon 10kΩ 1/4W ±5%	1	
R244	**ERD25TJ681**	Carbon 680Ω 1/4W ±5%	1	
R245,246	**ERD25TJ153**	Carbon 15kΩ 1/4W ±5%	2	
R247	**ERD25TJ101**	Carbon 100Ω 1/4W ±5%	1	
R248	**ERD25TJ152**	Carbon 1.5kΩ 1/4W ±5%	1	
R249	**ERD25TJ104**	Carbon 100kΩ 1/4W ±5%	1	
R250	**ERD25TJ102**	Carbon 1kΩ 1/4W ±5%	1	
R251	**ERD25TJ101**	Carbon 100Ω 1/4W ±5%	1	
R301	**ERD25TJ682**	Carbon 6.8kΩ 1/4W ±5%	1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
R302	**ERD25TJ101**	Carbon	100Ω	1/4W	±5%	1	
R303	**ERD25TJ332**	Carbon	3.3kΩ	1/4W	±5%	1	
R304	**ERD25TJ333**	Carbon	33kΩ	1/4W	±5%	1	
R305	**ERD25TJ681**	Carbon	680Ω	1/4W	±5%	1	
R306	**ERG1ANJ330**	M. Film	33Ω	1W	±5%	1	
R307,308	**ERD25TJ222**	Carbon	2.2kΩ	1/4W	±5%	2	
R309,310	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R311	**ERD25TJ220**	Carbon	22Ω	1/4W	±5%	1	
R312	**ERD25TJ224**	Carbon	220kΩ	1/4W	±5%	1	
R313	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	1	
R314	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	1	
R315	**ERD25TJ563**	Carbon	56kΩ	1/4W	±5%	1	
R316	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	1	
R317	**ERD25TJ473**	Carbon	47kΩ	1/4W	±5%	1	
R318	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	1	
R401,402	**ERD25T100**	Carbon	10Ω	1/4W	±5%	2	
R405,406	**ERD25TJ224**	Carbon	220kΩ	1/4W	±5%	2	
R407,408	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R409,410	**ERD25TJ224**	Carbon	220kΩ	1/4W	±5%	2	
R411,412	**ERD25TJ392**	Carbon	3.9kΩ	1/4W	±5%	2	
R413,414	**ERD25TJ224**	Carbon	220kΩ	1/4W	±5%	2	
R415,416	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	2	
R417,418	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	2	
R419,420	**ERD25TJ222**	Carbon	2.2kΩ	1/4W	±5%	2	
R421,422	**ERD25TJ823**	Carbon	82kΩ	1/4W	±5%	2	
R423,424	**ERD25TJ472**	Carbon	4.7kΩ	1/4W	±5%	2	
R427,428	**ERD25TJ332**	Carbon	3.3kΩ	1/4W	±5%	2	
R429,430	**ERD25TJ334**	Carbon	330kΩ	1/4W	±5%	2	
R431,432	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R433,434	**ERD25TJ471**	Carbon	470Ω	1/4W	±5%	2	
R435,436	**ERD25TJ470**	Carbon	47Ω	1/4W	±5%	2	
R437,438	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R440	**ERG1ANJ151**	M. Film	150Ω	1W	±5%	1	
R441	**ERD25TJ151**	Carbon	150Ω	1/4W	±5%	1	
R442	**ERQ12HJ151**	M. Film	150Ω	1/2W	±5%	1	
R444	**ERG1ANJ680**	M. Film	68Ω	1W	±5%	1	
R445	**ERG1ANJ470**	M. Film	47Ω	1W	±5%	1	
R446	**ERQ12HJ220**	M. Film	22Ω	1/2W	±5%	1	
R447,448	**ERD25TJ332**	Carbon	3.3kΩ	1/4W	±5%	2	
R449	**ERD25TJ471**	Carbon	470Ω	1/4W	±5%	1	

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
R450	**ERD25TJ333**	Carbon	33kΩ	1/4W	±5%	1	
R451,452	**ERD25TJ105**	Carbon	1MΩ	1/4W	±5%	2	
R453,454	**ERD25TJ682**	Carbon	6.8Ω	1/4W	±5%	2	
R455,456	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	2	
R457,458	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R461,462	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R463,464	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R465	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	1	
R467,468	**ERD25TJ563**	Carbon	56kΩ	1/4W	±5%	2	
R469,470	**ERD25TJ823**	Carbon	82kΩ	1/4W	±5%	2	
R471,472	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R481,482	**ERD25TJ104**	Carbon	100kΩ	1/4W	±5%	2	
R483,484	**ERD25TJ101**	Carbon	100Ω	1/4W	±5%	2	
R485,486	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R487	**ERD25TJ104**	Carbon	100kΩ	1/4W	±5%	1	
R501,502	**ERD25TJ155**	Carbon	1.5MΩ	1/4W	±5%	2	
R503,504	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	2	
R505,506	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R507,508	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	2	
R509,510	**ERD25TJ333**	Carbon	33kΩ	1/4W	±5%	2	
R511,512	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	2	
R515,516	**ERD25TJ153**	Carbon	15kΩ	1/4W	±5%	2	
R517,518	**ERD25TJ332**	Carbon	3.3kΩ	1/4W	±5%	2	
R519,520	**ERD25TJ223**	Carbon	22kΩ	1/4W	±5%	2	
R521,522	**ERD25TJ222**	Carbon	2.2kΩ	1/4W	±5%	2	
R523,524	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R525,526	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R527,528	**ERD25TJ105**	Carbon	1MΩ	1/4W	±5%	2	
R529,530	**ERD25TJ155**	Carbon	1.5MΩ	1/4W	±5%	2	
R531,532	**ERD25TJ221**	Carbon	220Ω	1/4W	±5%	2	
R533,534	**ERD25TJ472**	Carbon	4.7kΩ	1/4W	±5%	2	
R535,536	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R537,538	**ERD25TJ103**	Carbon	10kΩ	1/4W	±5%	2	
R539,540	**ERD25TJ154**	Carbon	150kΩ	1/4W	±5%	2	
R541	**ERG1ANJ470**	M. Film	47Ω	1W	±5%	1	
R601,602	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R603,604	**ERD25TJ471**	Carbon	470Ω	1/4W	±5%	2	
R605,606	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	2	
R607,608	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	2	
R609,610	**ERD25TJ222**	Carbon	2.2kΩ	1/4W	±5%	2	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
R611,612	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R613,614	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	2	
R615,616	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R617,618	**ERD25TJ682**	Carbon	6.8kΩ	1/4W	±5%	2	
R619,620	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	2	
R622,623	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R701,702	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R703,704	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	2	
R705,706	**ERD50TJ4R7**	Carbon	4.7Ω	1/2W	±5%	2	
R707,708	**ERD50TJ331**	Carbon	330Ω	1/2W	±5%	2	
R709,710	**ERD50TJ331**	Carbon	330Ω	1/2W	±5%	2	
R801,802	ERO25CKF3301	M. Film	3.3kΩ	1/4W	±1%	2	
R803,804	**ERD25TJ181**	Carbon	180Ω	1/4W	±5%	2	
R805,806	**ERD25TJ473**	Carbon	47kΩ	1/4W	±5%	2	
R807,808	**ERD25TJ104**	Carbon	100kΩ	1/4W	±5%	2	
R809,810	**ERD25TJ121**	Carbon	120Ω	1/4W	±5%	2	
R811,812	**ERD25TJ154**	Carbon	150kΩ	1/4W	±5%	2	
R813,814	**ERD25TJ684**	Carbon	680kΩ	1/4W	±5%	2	
R815,816	**ERD25TJ274**	Carbon	270kΩ	1/4W	±5%	2	
R817,818	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R819	**ERD25TJ683**	Carbon	68kΩ	1/4W	±5%	1	
R820	**ERD25TJ221**	Carbon	220Ω	1/4W	±5%	1	
R821	**ERD25TJ151**	Carbon	150Ω	1/4W	±5%	1	
R822	**ERD25TJ221**	Carbon	220Ω	1/4W	±5%	1	
R823,824	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	2	
R825	**ERD25TJ220**	Carbon	22Ω	1/4W	±5%	1	
R826	**ERG1ANJ101**	M. Film	100Ω	1W	±5%	1	
R827	**ERG1ANJ151**	M. Film	150Ω	1W	±5%	1	
R828	**ERD25TJ154**	Carbon	150kΩ	1/4W	±5%	1	
R829	**ERD25TJ104**	Carbon	100kΩ	1/4W	±5%	1	
R830	**ERD25TJ223**	Carbon	22kΩ	1/4W	±5%	1	
R831	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	1	
R832	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	1	
R833	**ERD25TJ332**	Carbon	3.3kΩ	1/4W	±5%	1	
R834	**ERD25TJ821**	Carbon	820Ω	1/4W	±5%	1	
R835	**ERD25TJ473**	Carbon	47kΩ	1/4W	±5%	1	
R836	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	1	
R837	**ERD25TJ472**	Carbon	4.7kΩ	1/4W	±5%	1	
R838	**ERD25TJ223**	Carbon	22kΩ	1/4W	±5%	1	
R839	**ERD25TJ472**	Carbon	4.7kΩ	1/4W	±5%	1	

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
R841,842	**ERD25TJ105**	Carbon	1MΩ	1/4W	±5%	2	
R901	**ERD25TJ472**	Carbon	4.7kΩ	1/4W	±5%	1	
R902	**ERG1ANJ470**	M. Film	47Ω	1W	±5%	1	
R903	**ERX1ANJ1R0**	M. Film	1Ω	1W	±5%	1	
R904	**ERQ12HJ220**	M. Film	22Ω	1/2W	±5%	1	
R905	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	1	
R906	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	1	
R908	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	1	
R909	**ERD25TJ680**	Carbon	68Ω	1/4W	±5%	1	
R910	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	1	
R911	**ERD25TJ221**	Carbon	220Ω	1/4W	±5%	1	
R912	**ERD25TJ331**	Carbon	330Ω	1/4W	±5%	1	
R913	**ERD25TJ681**	Carbon	680Ω	1/4W	±5%	1	
R915	**ERD25TJ152**	Carbon	1.5kΩ	1/4W	±5%	1	
R917	**ERG2ANJ680**	M. Film	68Ω	2W	±5%	1	
R918	**ERD25TJ102**	Carbon	1kΩ	1/4W	±5%	1	

CAPACITORS

C101,102	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	2	
C103,104	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	2	
C105,106	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	2	
C107	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C108,109	**ECEA16V220**	Electrolytic	220μF	16WV		2	
C110	**ECEA50V1**	Electrolytic	1μF	50WV		1	
C111	**ECEA50V1**	Electrolytic	1μF	50WV		1	
C112,113	**ECEA16V220**	Electrolytic	220μF	16WV		2	
C114	**ECEA50V1**	Electrolytic	1μF	50WV		1	
C115	**ECEA25V2R2**	Electrolytic	2.2μF	25WV		1	
C201,202	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	2	
C203	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C204	**ECCD1H270K**	Ceramic	27pF	50WV	±10%	1	
C205	**ECQS1152JZ**	Styrol	1500pF	125WV	±5%	1	
C206	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C207,208	**ECKD1H223MD**	Ceramic	0.022μF	50WV	±20%	2	
C209	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C210	**ECEA16V220**	Electrolytic	220μF	16WV		1	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
C211	**ECKD1H223MD**	Ceramic 0.022μF 50WV ±20%	1	
C212	**ECEA35V4R7**	Electrolytic 4.7μF 35WV	1	
C213	**ECKD1H472MD**	Ceramic 0.0047μF 50WV ±20%	1	
C214,215	**ECCD1H101K**	Ceramic 100pF 50WV ±10%	2	
C216	**ECEA25V2R2**	Electrolytic 2.2μF 25WV	1	
C217	**ECKD1H103MD**	Ceramic 0.01μF 50WV ±20%	1	
C218	**ECEA16V10**	Electrolytic 10μF 16WV	1	
C219	**ECKD1H102MD**	Ceramic 0.001μF 50WV ±20%	1	
C220	**ECKD1H223MD**	Ceramic 0.022μF 50WV ±20%	1	
C221	**ECCD1H471K**	Ceramic 470pF 50WV ±10%	1	
C222	**ECCD1H680K**	Ceramic 68pF 50WV ±10%	1	
C223	**ECKD1H223MD**	Ceramic 0.022μF 50WV ±20%	1	
C224,225	**ECKD1H103MD**	Ceramic 0.01μF 50WV ±20%	2	
C226	**ECKD1H223MD**	Ceramic 0.022μF 50WV ±20%	1	
C227	**ECKD1H222MD**	Ceramic 0.0022μF 50WV ±20%	1	
C228	**ECQS1471JZ**	Styrol 470pF 125WV ±5%	1	
C229	**ECCD1H120K**	Ceramic 12pF 50WV ±10%	1	
C230	**ECQS1161JZ**	Styrol 160pF 125WV ±5%	1	
C231	**ECQS1301JZ**	Styrol 300pF 125WV ±5%	1	
C232	**ECCD1H330K**	Ceramic 33pF 50WV ±10%	1	
C233	**ECQS1472JZ**	Styrol 4700pF 125WV ±5%	1	
C234	**ECKD1H102MD**	Ceramic 0.001μF 50WV ±20%	1	
C235	**ECKD1H472MD**	Ceramic 0.0047μF 50WV ±20%	1	
C236	**ECKD1H223PF**	Ceramic 0.022μF 50WV ±5%	1	
C239	**ECEA16V220**	Electrolytic 220μF 16WV	1	
C240	**ECEA16V10**	Electrolytic 10μF 16WV	1	
C241	**ECCD1H270K**	Ceramic 27pF 50WV ±10%	1	
C242	**ECKD1H223PF**	Ceramic 0.022μF 50WV +100,−0%	1	
C243	**ECEA16V10**	Electrolytic 10μF 16WV	1	
C244,245	**ECKD1H223PF**	Ceramic 0.022μF 50WV +100,−0%	2	
C246	**ECKD1H223PF**	Ceramic 0.022μF 50WV +100,−0%	1	
C247	**ECCD1H100K**	Ceramic 10pF 50WV ±10%	1	
C301	**ECEA50V1**	Electrolytic 1μF 50WV	1	
C302	**ECQM1H473MZ**	Polyester 0.047μF 50WV ±20%	1	
C303	**ECQS1152JZ**	Styrol 1500pF 125WV ±5%	1	
C304	**ECSF35ER22T**	Tantalum 0.22μF 35WV	1	
C305	**ECSF35ER47T**	Tantalum 0.47μF 35WV	1	
C306	**ECEA16V47**	Electrolytic 47μF 16WV	1	
C307	**ECEA16V220**	Electrolytic 220μF 16WV	1	
C308	ECEA50MR33E	Electrolytic 0.33μF 50WV	1	

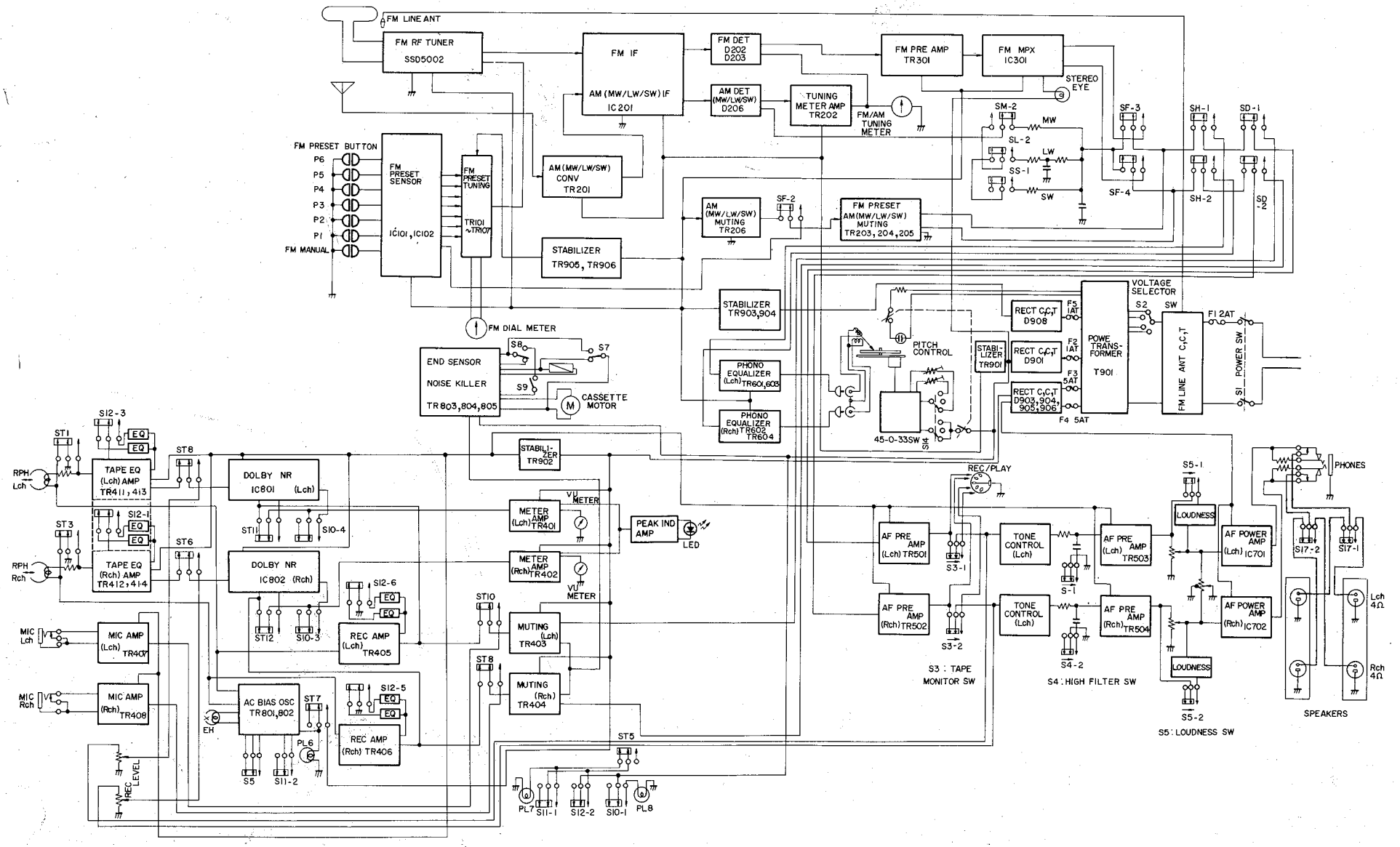
Ref. No.	Part No.	Description	Per Set (pcs.)	Remarks
C309,310	**ECKD1H103MD**	Ceramic 0.01μF 50WV ±20%	2	
C311,312	**ECKD1H333MD**	Ceramic 0.033μF 50WV ±20%	2	
C313,314	**ECKD1H472MD**	Ceramic 0.0047μF 50WV ±20%	2	
C315	**ECEA50V3R3**	Electrolytic 3.3μF 50WV	1	
C401,402	**ECEA50M4R7**	Electrolytic 4.7μF 50WV	2	
C403,404	**ECKD1H102PF**	Ceramic 0.001μF 50WV +100,−0%	2	
C407,408	**ECEA16V10**	Electrolytic 10μF 16WV	2	
C409,410	**ECEA16V10**	Electrolytic 10μF 16WV	2	
C411,412	**ECQM1H153MZ**	Polyester 0.015μF 50WV ±20%	2	
C415,416	ECEA16N4R7	Electrolytic 4.7μF 16WV	2	
C417,418	**ECEA50V3R3**	Electrolytic 3.3μF 50WV	2	
C419,420	**ECEA16V10**	Electrolytic 10μF 16WV	2	
C421,422	**ECSF35ER68T**	Tantalum 0.68μF 35WV	2	
C423,424	**ECEA50V1**	Electrolytic 1μF 50WV	2	
C425,426	**ECQM1H437MZ**	Polyester 0.047μF 50WV ±20%	2	
C427,428	**ECQM1H103MD**	Polyester 0.01μF 50WV ±20%	2	
C429,430	**ECEA16V10**	Electrolytic 10μF 16WV	2	
C431,432	**ECQM1H472MZ**	Polyester 0.0047μF 50WV ±20%	2	
C433,434	**ECQS1102JZ**	Styrol 1000pF 125WV ±5%	2	
C436,437	**ECEA25V220**	Electrolytic 220μF 25WV	2	
C438	**ECEA16V470**	Electrolytic 470μF 16WV	1	
C439	**ECEA16V220**	Electrolytic 220μF 16WV	1	
C440	**ECEA16V100**	Electrolytic 100μF 16WV	1	
C441	**ECEA16V47**	Electrolytic 47μF 16WV	1	
C443,444	**ECQM1H183MZ**	Polyester 0.018μF 50WV ±20%	2	
C446	**ECEA16V10**	Electrolytic 10μF 16WV	1	
C447,448	**ECEA50V3R3**	Electrolytic 3.3μF 50WV	2	
C451,452	**ECEA50M4R7**	Electrolytic 4.7μF 50WV	2	
C453,454	**ECKD1H102PF**	Ceramic 0.001μF 50WV +100,−0%	2	
C455,456	**ECSF35ER22T**	Tantalum 0.22μF 35WV	2	
C457	**ECKD1H223PF**	Ceramic 0.022μF 50WV +100,−0%	1	
C458	**ECEA50V3R3**	Electrolytic 3.3μF 50WV	1	
C461,462	**ECSF35ER1T**	Tantalum 0.1μF 35WV	2	
C463,464	**ECQM1H393MZ**	Polyester 0.039μF 50WV ±20%	2	
C470	**ECSZ35EFR1TE**	Electrolytic 0.1μF 35WV	1	
C501,502	**ECEA50V1**	Electrolytic 1μF 50WV	2	
C503,504	**ECKD1H102PF**	Ceramic 0.001μF 50WV +100,−0%	2	
C505,506	**ECEA50V1**	Electrolytic 1μF 50WV	2	
C507,508	**ECKD1H222MD**	Ceramic 0.0022μF 50WV ±20%	2	
C509,510	**ECKD1H153MD**	Ceramic 0.015μF 50WV ±20%	2	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
C511,512	**ECKD1H223MD**	Ceramic	0.022μF	50WV	±20%	2	
C513,514	**ECQM1H683MZ**	Polyester	0.068μF	50WV	±20%	2	
C515,516	**ECKD1H332MD**	Ceramic	0.0033μF	50WV	±20%	2	
C517,518	**ECEA50V1**	Electrolytic	1μF	50WV		2	
C521,522	**ECEA50V1**	Electrolytic	1μF	50WV		2	
C523,524	**ECSF35ER22T**	Tantalum	0.22μF	35WV		2	
C527	**ECEA16V220**	Electrolytic	220μF	16WV		1	
C601,602	**ECEA16V47**	Electrolytic	47μF	16WV		2	
C603,604	**ECCD1H560K**	Ceramic	56pF	50WV	±10%	2	
C605,606	**ECKD1H102PF**	Ceramic	0.001μF	50WV	+100,−0%	2	
C607,608	**ECCD1H560K**	Ceramic	56pF	50WV	±10%	2	
C609,610	**ECEA16V33**	Electrolytic	33μF	16WV		2	
C611,612	**ECEA50V1**	Electrolytic	1μF	50WV		2	
C613,614	**ECQM1H333MZ**	Polyester	0.033μF	50WV	±20%	2	
C615,616	**ECQM1H103MZ**	Polyester	0.01μF	50WV	±20%	2	
C617	**ECEA16V100**	Electrolytic	100μF	16WV		1	
C618	**ECEA16V220**	Electrolytic	220μF	16WV		1	
C701,702	**ECEA50V3R3**	Electrolytic	3.3μF	50WV		2	
C703,704	**ECEA35V47**	Electrolytic	47μF	35WV		2	
C705,706	**ECKD1H102MD**	Ceramic	0.001μF	50WV	±20%	2	
C707,708	**ECEA16V47**	Electrolytic	47μF	16WV		2	
C709,710	**ECQM1H473MZ**	Polyester	0.047μF	50WV	±20%	2	
C711,712	**ECEA50V1**	Electrolytic	1μF	50WV		2	
C801,802	**ECSF35ER33T**	Tantalum	0.33μF	35WV		2	
C803,804	**ECQS1392JZ**	Styrol	3900pF	125WV	±5%	2	
C805,806	**ECQS1332KZ**	Styrol	3300pF	125WV	±5%	2	
C807,808	**ECQS1222JZ**	Styrol	2200pF	125WV	±5%	2	
C809,810	**ECEA16V10**	Electrolytic	10μF	16WV		2	
C811,812	**ECEA16V10**	Electrolytic	10μF	16WV		2	
C813,814	**ECQS1472JZ**	Styrol	4700pF	125WV	±5%	2	
C815,816	**ECQS1562JZ**	Styrol	5600pF	125WV	±5%	2	
C817,818	**ECEA16V10**	Electrolytic	10μF	16WV		2	
C819,820	**ECQM1H273FZ**	Polyester	0.027μF	50WV	±1%	2	
C821,822	**ECQM1H473JZ**	Polyester	0.047μF	50WV	±5%	2	
C823,824	**ECEA16V10**	Electrolytic	10μF	16WV		2	
C825,826	**ECQM1H104KZ**	Polyester	0.1μF	50WV	±10%	2	
C827,828	**ECQM1H334KZ**	Polyester	0.33μF	50WV	±10%	2	
C829	**ECEA16V220**	Electrolytic	220μF	16WV		1	
C830	**ECEA16V33**	Electrolytic	33μF	16WV		1	
C831,832	**ECSF35ER1T**	Tantalum	0.1μF	35WV		2	

Ref. No.	Part No.	Description				Per Set (pcs.)	Remarks
C833	**ECQS1471JZ**	Styrol	470pF	125WV	±5%	1	
C834	**ECQS1182JZ**	Styrol	1800pF	125WV	±5%	1	
C835	**ECQM1H333MZ**	Polyester	0.033μF	50WV	±20%	1	
C836	**ECQM1H683MZ**	Polyester	0.068μF	50WV	±20%	1	
C837	**ECQM1H104KZ**	Polyester	0.15μF	50WV	±10%	1	
C838,839	**ECCD1H331K**	Ceramic	330pF	50WV	±10%	2	
C840	**ECEA16V100**	Electrolytic	100μF	16WV		1	
C842	ECEA16N4R7	Electrolytic	4.7μF	16WV		1	
C843,844	**ECEA16V100**	Electrolytic	100μF	10WV		2	
C845	**ECEA50V3R3**	Electrolytic	3.3μF	50WV		1	
C847	**ECEA50V1**	Electrolytic	1μF	50WV		1	
C848	**ECEA16V10**	Electrolytic	10μF	16WV		1	
C901	**ECQM1H334MZ**	Polyester	0.33μF	50WV	±20%	1	
C902,903	ECET35R332SU	Electrolytic	3300μF	35WV		2	
C904	ECET35R222SU	Electrolytic	2200μF	35WV		1	
C905,906	ECET16R3300S	Electrolytic	3300μF	16WV		2	
C907	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C908	**ECEA16V100**	Electrolytic	100μF	16WV		1	
C909	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	1	
C910,911	ECKDDS101MB	Ceramic	100pF	250WV	±20%	2	Except UK, GE
C912	ECKDGS101MB4	Ceramic	100pF	250WV	±20%	1	For UK, GE only
C913	**ECEA16V220**	Electrolytic	220μF	16WV		1	
C914,915	**ECKD1H223PF**	Ceramic	0.022μF	50WV	+100,−0%	2	
C916,917	**ECEA16V100**	Electrolytic	100μF	16WV		2	
C918	**ECEA16V100**	Electrolytic	100μF	16WV		1	
C919	**ECEA25V1000**	Electrolytic	1000μF	25WV		1	
C920	**ECEA25V100**	Electrolytic	100μF	25WV		1	
C921,922	**ECEA50V1**	Electrolytic	1μF	50WV		2	

BLOCK DIAGRAM



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